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GRADUATE AND PROFESSIONAL EDUCATION, AN ANNOTATED BIBLIOGRAPHY.

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THIS ANNOTATED BIBLIOGRAPHY CONTAINS REFERENCES TO GENERAL GRADUATE EDUCATION AND TO EDUCATION FOR THE FOLLOWING PROFESSIONAL FIELDS--ARCHITECTURE, BUSINESS, CLINICAL PSYCHOLOGY, DENTISTRY, ENGINEERING, LAW, LIBRARY SCIENCE, MEDICINE, NURSING, SOCIAL WORK, TEACHING, AND THEOLOGY. (HW)

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The Center for
Research and Development in
Higher Education

GRADUATE AND PROFESSIONAL EDUCATION

An Annotated Bibliography

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UNIVERSITY OF CALIFORNIA, BERKELEY

EA 001 070

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GRADUATE AND PROFESSIONAL EDUCATION

An Annotated Bibliography

Ann M. Heiss
Anne Davis
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Center for Research and Development in Higher Education
University of California
Berkeley

1967

PREFACE

Graduate and professional schools currently are feeling the effects of the increased flow of students into higher education. With few exceptions, these institutions face their responsibilities with little relevant data or research on which to base projections or formulate programs.

The Center for Research and Development in Higher Education at the University of California, Berkeley, is planning to study a number of aspects of graduate and professional education. As part of the preparation for this study, Project Director Dr. Ann M. Heiss and Research Assistants Anne Davis and Frank Voci developed the following annotated bibliography with the assistance of Katharine Kunst of the Center staff.

The Center has published this bibliography to aid researchers and others concerned with graduate and professional education.

Leland L. Medsker, Acting Chairman
Center for Research and Development
in Higher Education
University of California, Berkeley

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GENERAL GRADUATE EDUCATION

Academic Senate, Berkeley Division Select Committee on Education. Education at Berkeley. Edited by Charles Muscatine. Report of the Select Committee on Education, University of California, Berkeley, 1966. 228 pp.

The result of the Select Committee's year-long study to find "...ways in which the traditions of human learning and scientific inquiry can be best advanced under the challenging conditions of size and scale that confront the university community." The first section of the report deals with the diversity in Berkeley student characteristics and presents arguments for a pluralistic approach to higher education. Central to the report is a consideration of the impact of large groups of graduate students and the emphasis on research. Proposes a new degree, Doctor of Arts, which would substitute a "learned" paper on a research project for the dissertation. Makes forty-two recommendations for educational improvement and reform.

American Association of Land-Grant Colleges and State Universities. Council on Graduate Work. Report of Proceedings, 71st Annual Convention. Denver, Colorado, November 11-14, 1957, pp. 273-83.

Statistical data and abstracts of reports. Covers: (1) use of tests in evaluation of applicants for graduate study, (2) seminar practices, (3) enrollment trends, (4) financial assistance, (5) relation of graduate studies to contract programs, and (6) graduate school communication.

Armsby, Henry H. Engineering and Scientific Manpower. U.S. Office of Education Circular No. 610. Washington, D.C.: U.S. Government Printing Office, 1960. 68 pp.

Description of programs and services designed to improve national scientific personnel resources in engineering, science, and teaching in: fifteen nongovernmental agencies, eleven federal agencies, and four presidential committees.

Atwood, Sanford S. "Graduate Education and Research," Graduate Journal (Supplement), 2:151-65, 1959.

Proposals from the provost of Cornell University that: (1) graduate education be regarded as an apprenticeship, (2) residence requirements for the Ph.D. be less stringent, (3) the Ph.D. be distinguished from the professional degree, and (4) the graduate school exert influence on the undergraduate level to stimulate and foster qualities of research and scholarship throughout undergraduate years.

Axelrod, Joseph (ed.). Graduate Study for Future College Teachers. Washington, D.C.: American Council on Education, 1959. 111 pp.

A discussion focusing on: what program or degree will provide the best college teachers in the needed numbers in the time available. Inquires into the adequacy of the present Ph.D. degree in college teacher preparation, the problem of teaching versus research, required versus optional special programs to improve teaching skills as part of the Ph.D., the possibility of a more rigorous master's degree as an alternate to the Ph.D. as a teaching degree, and the effect of quantitative factors on the quality of graduate education.

Axt, Richard. Research on Graduate Education. Washington, D.C.: Brookings Institute, 1959. 108 pp.

A report of a conference of university presidents, graduate deans, government officials, and representatives of educational foundations and associations convened at Brookings Institute. The conference focused on the kinds of information needed on graduate education and the means for obtaining this information. The report discusses: (1) Collection of current data, (2) graduate education costs and capacity for institutional expansion, (3) financial support from federal and private agencies, (4) estimating projected needs for manpower, programs, expansion, and finance, (5) research: what kind and by whom? and (6) graduate study and graduate students.

Barzun, Jacques, J. P. Elder, and David L. Thomson. "The Great Split--Scholarship and Teaching," Association of Graduate Schools, Journal of Proceedings and Addresses, 8th Annual Conference, 1956, pp. 106-24.

The report of a panel discussion regarding meaning of scholarship, college teaching, and the quality of Ph.D. programs for preparing scholarly teachers. Discussion complements Strothmann's recommendation in Graduate School Today and Tomorrow.

Beach, L. B. "Freedom and Discipline in Graduate Programs," Journal of Higher Education, 30:120-27, March, 1959.

A discussion of the Ph.D. program at Northwestern University. Recommends the elimination of course requirements per se in the regimen of doctoral training. Stresses the encouragement of intellectual independence and variation in programming on a tailor-made basis. Describes means of liberating students by other graduate schools, such as independent study, advanced standing, and interdisciplinary study. Challenges the system which gives degree only on basis of completion of formal requirements. Recommends Whitehead's three-stage concept in education: (1) Adventure, (2) precision, and (3) generalization.

Becker, Howard S. and James Carper. "The Elements of Identification with an Occupation," American Sociological Review, 21:341-48, June, 1956.

Reports an attempt to break down the concept of identification into its components for comparison and analysis of social structure and personal development. Discusses the process of identification and the nature and functioning of identity in conduct. Specifically this study deals with the identification of a man with his work. The data are based upon interviews with students doing graduate work in philosophy, physiology, and mechanical engineering. The three groups are compared in three major elements of work identification: (1) occupational title, (2) commitment to particular organization, and (3) significance for one's position in larger society.

Becker, Howard S. and Anselm L. Strauss. "Careers, Personality, and Adult Socialization," American Journal of Sociology, 62:253-63, November, 1956.

Examines personality and personality change in developmental manner by studying careers as they relate to institutions and to persons. Text examines careers in work organizations and occupations. Discusses: (1) Recruiting, (2) replacement, (3) training, (4) schooling, (5) routing through a career, (6) changing situations, and (7) linkage to personal identity.

Bendig, A. W. and Peter T. Hountras. "Anxiety, Authoritarianism, and Student Attitude toward Departmental Control of College Instruction," Journal of Educational Psychology, 50:1-7, February, 1959.

A study of student attitudes regarding the control on classroom activities and policies by a college department. Subjects were students in the School of Education at the University of Pittsburgh. Findings indicated that, contrary to popular notion, graduate students are not more anxious and authoritarian than the undergraduate student.

Berelson, Bernard. "What Should be the Direction of Graduate Education?," Current Issues in Higher Education. Edited by G. Kerry Smith. Washington, D.C.: National Education Association, 1959, pp. 150-54.

A discussion of four major problems in graduate education: (1) Competency of college teaching depending on reforms in graduate education, (2) graduate schools becoming professional schools, (3) need for broadened national distribution of graduate study, and (4) loss of scholarly quality in the master's degree for college teaching. Offers proposals for the resolution of these issues.

Berelson, Bernard. "The Studies of Graduate Education," Proceedings of the Midwest Conference on Graduate Study and Research, 14th Annual Meeting, 1958, pp. 34-48.

Reports little change in graduate education during the past fifty years. Reviews the literature on graduate education which discloses that, although the current status of graduate education is critical, findings are repetitious in that the issues are never resolved. Concludes that need for a resolution of problems becomes more acute in each succeeding generation.

Berelson, Bernard. Graduate Education in the United States. New York: McGraw-Hill Book Co., Inc., 1960. 346 pp.

A major study of the historical development and present status of graduate education, institutions, students, and programs. Data compiled from extensive personal interviews, independent catalog studies, bibliographical material and journals, and wide-ranging questionnaire polls. Organized in three parts: (1) The past; (2) the present; and (3) the future; deals with specific problems of professionalization, growth and changes, administration and organization, student origins, background, motivation, caliber, preparation, recruitment, and all aspects of graduate programs.

Blanck, Gertrude Sacks. "The Development of Psychotherapy as a Profession: A Study of the Process of Professionalization." Unpublished doctoral dissertation, New York University, 1963.

Hypothesizes: "The development of an occupation into a profession involves specific evolutionary phases which are generic to the process of development of all professions." Medicine is shown as the prototypical profession for extrapolation of phases in the development toward full professional status. Psychotherapy and its stages of development are matched against those of the prototypical model.

Bowles, Frank H. and Charles M. Holloway. "The Coming Age of College," American Association of University Professors Bulletin, 46:271-76, September, 1960.

Discussion by members of the College Entrance Examination Board of: (1) articulation between high school and college, (2) developments in college admissions and admissions testing, (3) selection and admission practices in graduate and professional schools. Questions "whether existing tests at this level come even close to meeting the real needs."

Brandwein, Paul. "The Selection and Training of Future Scientists," Science Education, 36:25-26, February, 1952.

Offers three hypotheses on nature of science talent: (1) Clearly definable science trait. Not necessarily a component of high general intelligence. (2) No single "science talent" trait. High-level ability in science is a function of high general intelligence. (3) Science talent trait exists, but it is either a component of high general intelligence or masked by it.

Brickman, William W. "Education for the Professions," School and Society, 75:262-67, April 26, 1952.

Contains evidence that more and more professions, new and old, are resorting to self-critical examinations to bring about improvement and raise standards of service. Reviews writings in several professional fields which represent attempts at self-examination.

Brickman, William W. "Scholarship versus Practical Research," School and Society, 88:107, March 12, 1960.

A criticism of curricular changes in the graduate program of the Woodrow Wilson School of Princeton designed to prepare men for careers in public affairs and not in academic work. Expresses concern and doubt as to whether a quality graduate school can afford to distinguish between a "scholarly" researcher and a "non-scholarly" researcher.

Brown, Aaron. "Graduate and Professional Education in Negro Institutions," Journal of Negro Education, 27:233-42, Summer, 1958.

A survey reporting institutional facilities in Negro institutions of higher education. Provides data on: (1) enrollments, (2) status of accreditation, (3) library and laboratory facilities, (4) fields of study, (5) degrees awarded, and (6) financial support and current problems.

Buswell, G. T., T. R. McConnell, A. M. Heiss, and D. Knoell. *Training for Educational Research*, Cooperative Research Project No. 51074. Berkeley, California: Center for Research and Development in Higher Education, 1966. 149 pp.

A comprehensive four-part study of doctoral recipients in education. Part I includes questionnaire responses from 818 (1954) doctoral recipients in education regarding their background, training, and productivity in research. Part II includes essentially the same data on the 1964 recipients in education, together with information on their graduate school costs. Part III offers an analysis of the nature and methodology used in the doctoral dissertations by 1964 recipients. Part IV is a study of the background, personality characteristics, graduate training, and research productivity of thirty-one eminent scholars. Offers recommendations for the reorganization and strengthening of graduate training for research.

Carmichael, Oliver C. *Universities: Commonwealth and American; A Comparative Study*. New York: Harper and Brothers, 1959. 390 pp.

A broad descriptive survey comparing American and Commonwealth universities. The topics include all aspects of law, medicine, science, and technology. Carmichael is in accord with most of Flexner's philosophy, but places greater emphasis on the intensified search for talent, which is contrary to Flexner's belief that this search must not exclude the large average mass by resorting to rigid selection. Author stresses the need for curriculum overhaul, guarding against overspecialization, and upholding highest ideals of the university.

Carmichael, Oliver C. "A Three-Year Master's Degree Beginning with the Junior Year in College," *Journal of Higher Education*, 31:127-32, March, 1960.

Describes a master's program designed to recruit and prepare college teachers. Compares the rigorously defined program with the program which is loosely constructed and not precisely defined, and favors the former because the latter does not attract the more able student. As outlined, the proposed three-year program is well defined and presumably will pave the way for completing the Ph.D. in two years. The program is designed to appeal to and stimulate the more serious student earlier in his academic career.

Carmichael, Oliver C. *Graduate Education: A Critique and a Program*. New York: Harper and Brothers, 1961. 213 pp.

A discussion of major problems facing graduate schools on the brink of their largest expansion in history. Although the graduate school is the most strategic segment of higher education, it is also the most inefficient division, as evidenced by a high attrition rate, lag between B.A. and Ph.D., the great gap in supply and demand for Ph.D. graduates, and the lack of articulation between the undergraduate and graduate programs. To meet the future demands for graduate education, the present university organization is inadequate. The graduate school needs a dean with a budget and authority to revise the program. The author recommends a three-year master's degree with emphasis on college teaching as the goal, and discusses the advantages of such a program.

Carmichael, Oliver C. "Improving the Quality of Graduate Education," Current Issues in Higher Education. Edited by G. Kerry Smith. Washington, D.C.: National Education Association, 1962, pp. 202-5.

A proposal that although knowledge of subject matter is the first requisite for effective college teaching, this is not enough. What must be added is a broad understanding and attitude toward education and learning. With these bases, Carmichael defines other qualities in graduate faculty and graduate programs required to improve the quality of graduate and professional education.

Carper, James W. and Howard S. Becker. "Adjustments to Conflicting Expectation in the Development of Identification with an Occupation," Social Forces, 36:51-56, October, 1957.

Descriptions of how each of three groups--mechanical engineering, philosophy, and physiology students--studied and handled the problem of assuming an occupational role. Includes a general discussion of a model for analysis. The author attempts to show that conflict does not come in assuming an occupational identity but rather centers around disparities between parental and occupational expectations.

Cartter, Alan M. An Assessment of Quality in Graduate Education. Washington, D.C.: American Council on Education, 1966. 131 pp.

A comparative study of graduate departments in 29 academic disciplines in 106 institutions. Findings are based on a survey of the informed opinion of three major groups: (1) Department chairmen, (2) distinguished senior scholars, and (3) knowledgeable junior scholars who had completed their formal training not more than ten years earlier. Respondents (4,008) were asked to: (1) describe the quality of the graduate faculty in their field at each of the 106 institutions on a seven-point scale, (2) rate the effectiveness of the doctoral program on a five-point scale, and (3) indicate on a four-point scale what changes in the relative positions of departments could be anticipated within the next five- to ten-year period. The report compares findings with earlier surveys by Hughes and Keniston. It includes statistical data on departments, profiles of respondents, and generalizations based on four selected disciplines.

Chase, Edith B. "A Study of Undergraduate Records of Graduates from Hunter College Who Later Earned Doctorates," Journal of Experimental Education, 29:49-60, September, 1960.

Compares the undergraduate records of 294 students at Hunter College who continued to the doctorate, with a random sample of 294 other students of the same period. The results indicated that the records of prospective doctors were significantly better than those of the average students.

Clark, Edward F. "Undergraduate Preparation for Graduate Study and Intellectual Leadership," National Catholic Education Association Bulletin, 55:141-43, August, 1958.

Suggests that educational leadership and personal conviction on the part of higher education administration officers in preparing students for graduate study is sadly lacking. Educational leadership must be developed by the dean and faculty and reflected in the quality of graduate students.

Cogan, Morris. "Toward a Definition of a Profession," Harvard Educational Review, 3350, Winter, 1953.

Proposes that a profession is a vocation whose practice is founded upon an understanding of the theoretical structure of some department of learning or science and upon the abilities accompanying such understanding. This understanding and these abilities are applied to the vital practices of man. The practices of the profession are modified by knowledge of a generalized nature and by the accumulated wisdom and experience of mankind which serve to correct the errors of specialism. The profession, serving the vital needs of man, considers its first ethical imperative is to be of altruistic service to the client.

Cowley, W. H. "Three Curricular Conflicts," Liberal Education, 46: 467-83, December, 1960.

A discussion of the conflicts between: (1) general and special education, (2) humanities and the sciences, (3) teaching and research. The author submits that the resolution of these conflicts is the responsibility of the graduate schools.

Dressel, Paul, et al. The Liberal Arts as Viewed by Faculty Members in Professional Schools. New York: Columbia University Teachers College, 1959. 68 pp.

An analysis of an inventory of attitudes of faculty members in professional schools toward the values of liberal arts education as a whole, and its constituent subject-matter fields in particular.

Findings are as follows: A generally favorable attitude toward liberal arts and science is exhibited, but not substantiated when choices among the liberal arts must be made explicit. Subjects in liberal arts and sciences which have direct relevance to specialties are preferred. The inventory also shows preference for those subjects which develop particular intellectual skills. The higher the administrative position, the more likely the incumbent values a broad general or liberal education as contrasted with training for a relatively narrow specialty. Faculties appear to be interested in liberal arts but are confused as to the ingredients and proportions to combine in a course of study to provide a more liberal education for specialized students.

Dure, Leon S. "More Graduate Students Are the Key to the Nation's Search for Scientists," American Mercury, 90:113, April, 1960.

Submits the thesis that the Ph.D. in science will not bring the rewards commensurate with the sacrifices and efforts required. The result is a lack of quality in the graduate students who continue to the doctorate and become members of the academic community. The author recommends a revision of the assistantship and fellowship system.

Eckert, Ruth and Robert Keller (eds.). The University Looks at Its Program. A report of University of Minnesota Bureau of Institutional Research. Minneapolis: The University of Minnesota Press, 1954. 214 pp.

Reports (in Part III) on curriculum evaluation in three select fields of graduate study, medical school students' attitudes toward psychiatry, examinations in psychology, foreign language requirements, and a follow-up study of the characteristics of Minnesota Ph.D.'s. A comprehensive institutional self-appraisal based on summaries of twenty-three separate studies conducted between 1942 and 1952.

Edwards, Marcia. Studies in American Graduate Education. Boston, Mass.: D. B. Updike, The Merrymount Press, 1944. 71 pp.

An inquiry into procedures for the organization and direction of graduate work in different departments at various selected universities. Based on data from interviews with faculty members, the author discusses such problems as specialization versus professionalism, financial support of graduate students, criteria for student selection, and techniques which may affect the quality of graduate education because of their relation to the appraisal of student achievement through testing.

Eells, Walter C. "Graduate Students in American Universities," Association of American Colleges Bulletin, 44:459-64, October, 1958.

Analysis of data showing the distribution of over 100,000 graduate students by subject fields for 1956-57 compared with figures for 1897. In 1897, one-fourth of the graduate students were in the natural sciences. In 1957, this number increased to one-half. Conversely, enrollments in the humanities and social sciences decreased from almost three-fourths to less than one-half.

Eells, Walter C. "Leading American Graduate Schools, 1948-1958," Liberal Education, 46:112-16, March, 1960.

Updates an earlier article, which ranked graduate schools according to the number of doctorates awarded from 1948-55. The author determines the five most outstanding institutions in 48 selected fields of graduate study. A significant fact is that from 1955 to 1958 there was an addition of nearly 50 per cent to the number of doctorates awarded in the period 1948-55.

Elbers, Gerald W. and Paul Duncan (eds.). The Scientific Revolution: Challenge and Promise. Washington, D. C.: Public Affairs Press, 1959. 280 pp.

An anthology of writings by thirty-two authors who discuss the dynamic changes and the resultant implications in the scientific fields. A section of the book is devoted to "The Education and the Use of Superior Talent," which includes chapters dealing with (1) problems of the graduate school, (2) financial aid for the graduate student, (3) federal government and university research, and (4) the advanced-degree man in industry.

Elder, J. P. A Criticism of the Graduate School of Arts and Sciences at Harvard University and Radcliffe College. Cambridge, Mass.: Harvard University Press, 1958. 48 pp.

A report of the results of a questionnaire survey in which Harvard Ph.D. recipients were asked to appraise their degree programs. Analysis was made of data on the formal requirements for the degree, the foreign language examination, delays in the degree program, quality of programs, preparation for teaching and student-faculty relationships. Recommends: (1) raising the standards of foreign language proficiency required; (2) greater breadth in the humanities programs; (3) more encouragement and guidance of students; (4) more full-time commitment to study; (5) a reappraisal of the examination requirements; (6) more guidance and discrimination on the selection of a thesis topic; and (7) improvement in student-faculty relationships.

Ericksen, Stanford C. "The Core Curriculum Is a Dependent Variable," American Psychologist, 13:56-58, 1958.

Identifies eleven education dimensions which constitute the rationale for almost any type of psychology core curriculum. Uses the core curriculum to illustrate the point that Ph.D. requirements in each department are simply means to larger ends which require explicit statement.

Feldman, Arnold S. and K. E. Knorr. "American Capability in Basic Science and Technological Invention. Center of International Studies Research Monograph No. 7," Princeton, New Jersey: The Center, 1960. 13 pp.

A report pointing out "...the need for more empirical research on the conditions of our scientific capability so that policy can in time proceed on a more informed basis." The recruitment of future scientists is dependent upon the developmental conditions which will make possible future capability of the U.S. in technological invention.

Frankel, Charles. Issues in University Education. New York: Harper and Brothers, 1959. 175 pp.

Essays by ten American scholars, each an interpretation of American higher education viewed as a product of social phenomena. The essays are designed to serve international communication by addressing themselves to visitors from other countries. They describe the American educational scene and the place and function of universities and learning in twentieth century civilization. Each scholar describes a particular aspect of the American university experience.

Friedman, Albert B. (ed.). Creativity in Graduate Education. Claremont, Cal.: Claremont Graduate School and University Center, 1964. 55 pp.

The published addresses given on the occasion of the inauguration of Dr. Louis Benezet as fifth president of the Claremont Graduate School and University Center on March 19, 1964, together with a summary of the proceedings. Additional commentary by W. T. Jones, Albert Friedman, and Stanley F. Reed. The addresses: "Dialogue with Destiny" by Milton S. Eisenhower; "Thoughts at Thermopylae" by Louis T. Benezet; "Graduate Education and the Creative Process" by Robert A. Service.

Friedenberg, Edgar Z. and Julius A. Roth. Self-Perception in the University. Chicago, Ill.: University of Chicago Press, 1954. 162 pp.

A monograph reporting a well-developed study of successful and unsuccessful graduate students. In defining the problem, the authors offer perceptive evaluative comments on a number of studies made on this subject. Statistical procedure chosen was Stephenson's O-Technique for the correlation of different individuals in their perceptions of the university and for examining the resulting matrix of correlations to decide which people were enough alike in their perceptions of the university that they might be meaningfully grouped and some general statements made. Included are samples of the (1) interview schedule on graduate work adjustment, (2) list of emotional needs, and (3) card-sort items.

Furman, Thomas E. "Curricular Patterns in Higher Education: The Biological Sciences," Higher Education, 19:17-21, July, 1963.

A report of U.S. Office of Education survey which summarizes prerequisites in the biological sciences and which concludes that the pattern of course and credit assignment practices in progress in these fields is highly consistent.

Gengerelli, J.A. "The Education of Future Scientists," Journal of Higher Education, 2, 35:61-70, February, 1964.

Poses the question: "Is technical expertise stifling scientific creativity?" One of his criticisms centers on the stress on "know-how" rather than "think-how," particularly on the graduate level, which is limited to methodology. Discusses training versus education or methodology versus growth.

Gilb, Corinne L. Hidden Hierarchies. New York: Harper and Row, 1966. 307 pp.

A study which places emphasis on the professions, professional associations, and their relationship to government. Its larger aim is to illuminate this development of the American system as a whole and the relationship among its various parts.

Good, Carter V. "History of Graduate Instruction in the United States," The Fiftieth Yearbook, Part I: Graduate Study in Education. Edited by Nelson B. Henry. Chicago, Ill.: The University of Chicago Press, 1951, pp. 1-9.

Suggests that three major social developments have altered the program and organization of graduate work: (1) Increase in numbers and change in character of graduate population, (2) shift in production of research from concentration in the universities to governmental, endowed, and industrial or commercial agencies, and (3) competition between public and private agencies for control of the results and procedures of research. The graduate school encountered the dilemma of expanding to render service to society and of maintaining standards developed through a quarter-century of strenuous effort. Conflict in the function and purpose of the graduate school has arisen from divergence between the liberal arts tradition, and the German university ideals of freedom of learning, teaching, research, and publication.

Gottleib, D. "Process of Socialization in the American Graduate School." Unpublished Ph.D. dissertation, Department of Sociology, University of Chicago, 1961.

A study which shows that career preferences are modified by contact with graduate study. It indicates that those who change their programs shift toward careers in research in those departments which stress research. The influence of direct personal communication with faculty is rated high as a career determinant. Researchers tend to internalize a research "life style" as well as a career interest.

Greenwood, David C. Solving the Scientist Shortage. Washington, D.C.: Public Affairs Press, 1958. 68 pp.

A discussion of the national resources and quality of engineers and scientists. It reports survey data of federal, industrial, and professional organizations' programs in an effort to determine causes of the shortage of scientists and how to meet the constantly rising needs for scientific talent.

Grigg, Charles M. Graduate Education. New York: Center for Applied Research in Education, 1965. 115 pp.

An analysis and critical review of the concepts of graduate education as distinct from professional education in relation to the growth of graduate enrollment.

Gropper, George L. and Robert Fitzpatrick. Who Goes to Graduate School? Pittsburgh, Penn.: American Institute for Research, 1959. 66 pp.

An informative report of a well-ordered study of factors influencing the decision to enter graduate training. Investigation, conducted in 1957-58 academic year, of a large and diverse sample of 358 graduate and professional students selected from 35 institutions by criteria designed to assure broad national representation. Findings: (1) Men who enter graduate training have (a) high college grades, (b) fathers with high educational attainment, high occupational status, but undistinguished incomes. (2) Men who enter professional school have (a) less distinguished college grades and (b) fathers with more distinguished incomes. Chief among the factors influencing advanced education plans are ability, sex, and social and economic status of the family.

Gustad, John W. "The Core Curriculum Is an Independent Variable," American Psychologist, 13:655-56, 1958.

A commentary on "The Core Curriculum Is a Dependent Variable" by Stanford Ericksen. Author Gustad suggests an alternative approach in analyzing the Ph.D. core curriculum. The dependent variable of interest is the characteristic of graduates of various departments with different core curricula. The suggested approach is to find and develop criteria of good performance by graduates rather than obtain agreement on the core curriculum.

Harmon, Lindsey R. "Field of Doctorate Specialization as a Function of Size of High School Graduating Class," Science, 130:1473, November, 1959.

A report by the director of research, National Research Council, on the findings of a study of relationships between science doctoral graduates and the location and size of their high schools. Reports that: (1) graduates in biological sciences come from small high schools in agricultural areas; (2) graduates in the behavioral sciences come from larger, urban schools; (3) graduates in physical sciences come from large high schools, though not with the disproportionate frequency of the graduates in the behavioral sciences.

Heiss, Ann M. "Berkeley Doctoral Students Appraise Their Graduate Programs." Berkeley, Cal.: The Center for Research and Development in Higher Education, The University of California, 1964. 113 pp.

A study of doctoral students at the University of California, Berkeley, designed to determine the character and quality of their graduate education and the extent to which their graduate educational experiences were seen as conducive to scholarly development. Reports the need for improved faculty-student interaction, for more adequate orientation to graduate study, and for reappraisal of degree requirements.

Henry, Nelson B. (ed.). Education for the Professions. National Society for the Study of Education: Sixty-first Yearbook. Chicago, Ill.: University of Chicago Press, 1962. 301 pp.

A major contribution to the study of the professions. This article includes a series of essays and historical accounts of the professions and professional education. Section I covers background and current status and includes a discussion of the problem of defining what a profession is. Section II includes case studies on medicine, engineering, teaching, business, and the graduate school as a professional school. Section III delineates some of the forces which operate to make professional education what it is today. Section IV is both a summary and a challenge for professional education to become what it might be.

Horner, John E. "A Dangerous Trend in Graduate Education," Journal of Higher Education, 30:167-68, 1966.

A report of findings from a study of 75 graduate school catalogs concluding that 627 courses open to graduate students in all fields are "mixed," or for both undergraduate and graduate. Contends that if such "mixed" course offerings continue in this trend, "graduate education" will become a misnomer.

Horner, John E. "A desperate Need in Higher Education," Journal of Higher Education, 2, 37:94-96, February, 1966.

States that in spite of a multiplicity of professional associations, none is designed to effect communication between graduate and undergraduate schools. Discusses two critical questions: (1) the concern of graduate schools for staffing undergraduate faculties, and (2) the provisions by graduate schools to meet the shortages. Argues that graduate research is overshadowing production of instructors for undergraduate faculties.

Horton, Byrne J. The Graduate School: Its Origin and Administrative Development. New York: New York University Bookstore, 1940. 182 pp.

Traces: (1) The development of the graduate school, (2) the idea of the university, and (3) the general development of higher education. Discusses the factors in the origin and development of Johns Hopkins University and its administration from 1880. Summary and conclusions regarding major problems and solutions for graduate education also are included.

Howard, Victor. "A Study of Academic Preferences and Their Apparent Relation to Student Change in a Program of General Education with Particular Reference to Students in the Various Science Areas," Science Education, 40:316-21, October, 1956.

Studies the changes in interest areas of students over a one-year period and compares students' changes, or achievement, in science and achievement of students in other "non-scientific" areas.

Following are student growth areas tested and instruments used: (1) Beliefs, attitudes, and reactions in general (Inventory of Beliefs). Significant differences were noted at 1 per cent level of confidence between changes or gains of students in various interest categories. (2) Ability to do critical analysis in reading and writing (test of critical analysis in reading and writing). (3) Critical thinking (test of critical thinking). No significant differences were noted at 5 per cent level of confidence.

Hughes, E. C. "Stress and Strain in Professional Education," Harvard Educational Review, 4, 29:319-29, Fall, 1959.

An excellent article reporting data derived from a study of attitudes concerning identification of students and staff with each other and effects of this identity on educational achievement. The study was conducted in a midwestern state university medical school. Data compiled from extensive observations of all activities and interviews of a random sample of sixty-four students stratified by year. These data were then checked against findings of analyses of other data related to professional education.

Jackson, William V. "The Distribution of Doctorates in Post-War Years," Journal of Higher Education, 28:41-44, January, 1957.

Reports an analysis of 52,009 doctorates conferred by 132 institutions in 48 fields of study over the period 1945-1954, and concludes that higher education for the doctorate is concentrated in a relatively small number of institutions and fields of study.

Katz, Michael B. "From Theory to Survey in Graduate Schools of Education," Journal of Higher Education, 37:325-34, June, 1966.

Bemoans the loss of "criteria" for a coherent program development within graduate schools of education and the overreliance of university educationists on occupational standards as a basis for program development. Schools of education become so preoccupied with educational structure as it exists that the structure becomes reinforced and the possibility of change is paralyzed as a result.

Killian, James R. "Augmenting Our Scientific and Engineering Manpower Resources," School and Society, 85:213-17, June 22, 1957.

Proposes changes at all levels of education in order to meet demands for more scientists and engineers. Changes include: (1) integration of liberal and scientific studies, (2) recognition of the humanistic qualities of science, (3) increased diversity and strengthening of new engineering programs, and (4) shift of emphasis from undergraduate to graduate level in professional education of engineers.

King, R. W. "From Schoolroom to Research Laboratory: A Problem in Education," American Association of University Professors Bulletin, 43:306-18, June, 1957.

Points out the great need for teaching competency in the graduate science faculties. Discusses the educational development of the research scientist, the problems involved, and proposes solutions. Author argues that this neglect of teaching will ultimately make science "a modern cult for specialists and technicians" and generally undermine the university function.

Kirk, Grayson. "It Takes a Person Too Long To Get an Advanced Degree," Nation's Schools, 64:50, July, 1959.

Makes four recommendations for the improvement of graduate education: (1) higher admission standards to insure better prepared graduate students, (2) emphasis on broad principles rather than mastery of a body of knowledge in professional education, (3) review and reform of degree requirements in order to relate them to the vital interests of the graduate student, and (4) continuous study throughout the year.

Knapp, Robert H. and H. B. Goodrich. Origins of American Scientists. Chicago: University of Chicago Press, 1952. 450 pp.

A report by faculty members of Wesleyan University on the results of a study which surveyed the educational background of 18,000 scientists in the U.S. with an assessment of data from approximately 500 colleges and universities.

Knowles, Asa S. "Emerging Features of Tomorrow's Higher Education," Educational Record, 38:329-39, October, 1957.

A description of the current status of higher education, as characterized by change and expansion. The author believes that a number of the larger prestigious universities will evolve into centers for advanced study with limited or no undergraduate programs. The function and idea of higher education will undergo redefinition in a new relationship to community in research or teaching on a contractual basis.

Koenker, Robert H. "Cooperative Graduate Programs," Journal of Teacher Education, 10, 4:507-12, December, 1959.

A survey of interinstitutional cooperative arrangements for graduate level offerings. Data was obtained from questionnaires returned by 229 institutions. Fifty-five had existing program arrangements with other institutions. Each program is described.

Kretzmann, O. P. "Report of Commission on Preparation for Professional and Graduate Study," Liberal Education, 46:12-16, March, 1960.

A report on the developments in progress designed to stimulate better communication and cooperation between the liberal arts colleges and graduate schools in all departments, with special emphasis on medical and law schools.

Kubie, Lawrence. "Some Unsolved Problems of the Scientific Career," American Scientist, 41:596-613, October, 1953.

Proposal by a prominent psychoanalyst that the life of a young scientist challenges our educational system from top to bottom, with unsolved problems awaiting much-needed investigation. He recommends a psychoanalytic study of an adequate sample of young scientists for information leading to solutions of problems requiring special help for the student in his struggle for emotional maturation. During professional preparation for scientific research, emotional problems of young scientists are more taxing than in other careers and are often overlooked. The author points out the significant relationship between masked neurotic components in the personality of an apparently normal scientist and the very nature of his chosen field, which serves to mask the neurotic components by dovetailing with them.

Lach, J. "Graduate Programs in the Undergraduate College," Journal of Higher Education, 36:121-30, March, 1965.

An article discussing the lack of justification for superimposing graduate programs on the undergraduate college. It argues that liberal arts colleges are weakened when the faculty becomes preoccupied with advanced students. It also stresses the importance of supplying the undergraduate faculty with good library facilities, travel money, flexible teaching schedules, and sabbatical leaves, to offset the notion that undergraduate teaching is less promising or stimulating to scholars.

Litchfield, Edward H. *The Role of the Academic Disciplines in a Modern University*. Pittsburgh, Penn.: The Chancellor's Office, University of Pittsburgh, 1958. 14 pp.

A description of the newly established college of the academic disciplines and its role and function in the university. The author states that the academic disciplines should be the element of integration within the total structure of the university: a synthesizing agent. This bulletin also announces a gift of $12 million from A. W. Mellon Educational and Charitable Trust for doctoral fellowships in the new college.

Lynn, Kenneth S. (ed.). *The Professions in America*. Boston, Mass.: Houghton Mifflin Co.,1965. 259 pp.

A collection of essays by fifteen prominent American professionals. The central issue considered is: Faced with a shortage of professional men and women, with a lowering of standards brought about by efforts to fill the gap, and with a growing conservatism and inflexibility within the professions themselves, where do we go from here? Individual discussions on the following topics are included: (1) law, (2) medicine, (3) teaching, (4) the sciences, (5) psychiatry, (6) city planning, (7) politics, (8) engineering, (9) architecture, and (10) journalism. Role changes and the sociology of the professions are considered.

Mechanic, D. *Students Under Stress*. New York: Free Press of Glencoe, 1962. 231 pp.

A presentation of case studies of the developmental stress patterns of graduate students. It describes the stress points and variations in response to requirements, examinations, and self-expectations.

McGlothlin, William J. *The Professional Schools*. New York: The Center for Applied Research in Education, Inc., 1964. 118 pp.

Assumes that society's demand for more numerous and complex technical skills and for specialized knowledge has caused a larger number of students to enroll in graduate schools. McGlothlin deals with some major questions on professional education: (1) The purpose of professions and the qualitative and quantitative aims of professional education; (2) what the curriculum should contain and how it can be organized best for education that follows in orderly fashion from basic to advanced studies; and (3) other questions having to do with faculty and students.

McGlothlin, William J. Patterns of Professional Education. New York: G. P. Putnam's Sons, 1960. 288 pp.

An excellent comparative study of the educational programs of the professions ranging from medicine to engineering, in terms of aims, curricula, teaching methods, faculty characteristics desired, criteria and procedures used in student selection and recruitment, relationships of professional school and university, program accreditation, and professional ethics. The writer identifies several critical assumptions in professional education which remain untested, suggests kinds of studies needed for revamping professional education programs, and states the need for national conferences of education leaders of the professions for interprofessional communication and plans for development.

McGrath, Earl J. Are Liberal Arts Colleges Becoming Professional Schools? New York: Columbia University Press, 1958. 26 pp.

A well-written discussion of the introduction into liberal arts colleges of subject matter that is of vocational or professional character. Graduate study preparatory to the Ph.D. has taken on a professional-vocational function. The author views the liberal arts college which has not shifted in purposes and offerings from exclusive liberal arts education to professional studies as an exceptional one. He warns that professionalization of liberal arts curricula and liberalization of professional curricula must not result in a loss of dignity or "excellence," defined as maximum achievement.

McGrath, Earl J. Liberal Education in the Professions. New York: Columbia University Press, 1959. 63 pp.

States that the purpose and content of liberal education, extended to include professional and semiprofessional instruction, necessitate a reexamination of the relationship of professional and liberal education. The emerging professions of status will be those which will address themselves not only to professional preparation but to personal life and civic responsibility as well. The three purposes dominant in liberal education today are to: (1) instill knowledge, (2) cultivate intellectual skills, and (3) nurture traits of personality and character basic to a reasoned and responsible life. Programs of professional education must integrate technical and general education in the sequence of studies throughout the period of higher education. The purposes of liberal education should determine the selection of subject matter, classroom practices, and evaluation procedures.

McGrath, Earl J. The Graduate School and the Decline of Liberal Education. New York: Columbia University Teachers College, 1959. 65 pp.

A plea for reconstruction of liberal education based on the suggestion that the decline in liberal education has been the result of the development of graduate schools. This issue is viewed in the historical perspective of educational purposes of higher education in America, particularly the nineteenth and twentieth centuries. Pivotal to this general view is the problem of the emergence of graduate education based on research and the creation of knowledge, which has caused liberal arts colleges to shift their emphasis from teaching to research.

McGrath, Earl J. The Predominantly Negro Colleges and Universities in Transition. New York: Columbia University Teachers College, 1965. 204 pp.

Presents information and data of great value to those concerned with the problems of higher education for Negroes, especially since relatively few studies have been done in this area. The author reminds us that these problems are unique and will require unique solutions. He presents a good case for maintaining the Negro college as a transitional expediency in the solution of some of these problems. The study analyzes patterns of 123 institutions. He also warns of the dangers of spurious Ph.D. programs by ambitious but unprepared administrators.

Mooney, Ross L. "Evaluating Graduate Education," Harvard Educational Review, 25:85-94, Spring, 1955.

A thought-provoking critical analysis of the rationale underlying contemporary graduate education. Professor Mooney considers several assumptions which he regards as detrimental to the integrated development of the graduate student. He finds undue reliance upon an orientation toward external authorities at the expense of the student's individuality and integrity. Books, professors, and courses are hurdles rather than opportunities for stimulating inquiry, if the aim of graduate education is to "discover, honor, develop, and thereby produce effective instruments of inquiry." The author offers many constructive suggestions which counterbalance the negative factors considered in his essay.

Mosher, Frederick C. *The Professions, Professional Education and the Public Service*. Berkeley, Cal.: Center for Research and Development in Higher Education, University of California (in press).

A comprehensive study of the professional preparation of public administrators. It examines the linkage between the professionals in government and their professional education and their subsequent impact upon government. The author attempts to identify the common denominators,similarities, and differences among professions and what these differences mean for American government. It draws upon existing literature and data, correspondence, and interviews with a limited number of public officials, representatives of professional organizations, and administrators and professors in a few professional schools. It attempts a comprehensive definition of the process of professionalization.

National Manpower Council. *Education and Manpower*. New York: Columbia University Press, 1960. 326 pp.

Contains discussion in Chapters 11 and 12 on the potential for higher education and factors influencing education for scientific and professional careers. Points out: (1) the tremendous untapped source of potential talent; (2) the great need to develop those conditions which will permit expansion of national intellectual resources; (3) factors which determine the flow of students into higher education; and (4) the relationships between economic affairs and higher education.

National Manpower Council. *A Policy for Scientific and Professional Manpower*. New York: Columbia University Press, 1953. 263 pp.

Deals with aspects of the problem of the quality of the nation's manpower resources. Part I is a statement of policy for scientific and professional manpower. Part II presents facts and issues about scientific and professional manpower, with specific data on the military, engineering profession, physicists, teachers, and physicians.

National Manpower Council. *Womanpower*. New York: Columbia University Press, 1957. 371 pp.

A special publication of the Council. This book is devoted to the role of women in national resources of talent. It includes several chapters devoted to education of women from high school through graduate school. Excellent bibliographical material.

National Science Foundation. *Scientific Manpower, 1959*. NSF-60-34. Washington,D.C.: U.S. Government Printing Office, 1960. 38 pp.

One of a series of reports containing published papers delivered at annual conferences held by Scientific Manpower Committee of the American Association for the Advancement of Science. Discussion of education and supply, demand, and recruitment of scientists in all related scientific fields.

National Science Foundation. Statistical Handbook of Science Education. NSF-60-13. Washington, D.C.: U.S. Government Printing Office, 1960. 94 pp.

Statistical data on professional education of engineers and scientists in the U.S. in three sections concerning: (1) human resources, (2) professional education programs in the sciences, and (3) appendix of statistical tables.

National Science Foundation. The President's Committee on Scientists and Engineers. A Program for National Information on Scientific and Technical Personnel. NSF-58-28. Washington, D.C.: The Foundation, 1958. 63 pp.

Proposes studies of the productivity of professional education and graduate schools to assess scientific manpower. Presents a program which includes fifteen projects for supplying needed information about national resources of scientists.

Ness, Fred (ed.). A Guide to Graduate Study: Program Leading to the Ph.D. Washington, D.C.: American Council on Education, 1960. 457 pp.

Designed to serve as a guide for the undergraduate planning on graduate study. It covers selection of school and academic and financial requirements and presents a realistic view of the educational life of the graduate student. Statistical data for making comparisons among institutions are given. The first part consists of a discussion of the principal matters of concern to the undergraduate in reaching a decision on graduate study, with particular reference to college teaching and research. The second part is devoted to programs leading to the Ph.D. Information is derived from a wide sampling of sources: graduate school deans, faculty members, graduate students, and the advisory council of the Professional and Graduate Study Commission of the Association of American Colleges.

Nourse, Alan E. So You Want to be a Scientist. New York: Harper and Brothers, 1960. 182 pp.

A book of advice to the prospective college student, outlining the scientific fields. Describes the work of the scientists and educational prerequisites. Includes sections dealing with graduate education and scientific research.

Palmer, Roderick. "General Education and the Profession-Bound Negro Student," *Journal of Negro Education*, 23:87-89, Winter, 1964.

Presents argument that educators concerned with general education need to reevaluate curriculum in order to provide for the Negro student those experiences missed throughout his educational history. This student brings unique problems and needs. His satisfaction with the mediocre must be replaced with a liberal spirit and a formulation of a value system of his own. His perception of himself and the world must be changed and provision must be made for the concomitant changes in his productivity and his personality.

Perrucci, Robert. "Significance and Intra-occupational Mobility: Some Methodological and Theoretical Roles, Together with a Case Study of Engineers," *American Sociological Review*, 26:874-83, December, 1961.

Assumes that measuring relative openness of American social structure has had two problems: (1) Use of gross occupational categories to measure number of occupational shifts between fathers and sons; and (2) statistical measures focusing on mean mobility rates rather than internal occupational shifts. This specific study focuses on a single occupational category (professional) whose members have an institutionalized avenue of mobility (education). A fine comparative sample of engineers shows the relation of socio-economic origins to relative prestige level of position within the professional category. It includes a statement on trends in American social structure towards rigidity.

Polder, Edward J. "Self-perceived Values: An Index to Evaluation in Graduate Education." Unpublished Ph.D. dissertation, the Ohio State University, Columbus, Ohio, 1958. 191 pp.

Attempts to: (1) identify the pattern by which a small sample of students admitted to candidacy for the Ph.D. at Ohio State University were able to experience qualities of personal significance from their education; (2) identify groupings of students according to the degree to which they were able to obtain increments of value from their educational experience; and (3) identify some commonalities of university environment which tend to offer significance for students.

Roe, Anne. "Analysis of Group Rorschachs of Biologists," *Journal of Projective Techniques*, 13:25-43, 1949.

Part of an extensive investigation of personality and vocation relationships focusing on scientists--begun on 188 biologists (18 women) from eight universities; one public and one private from each of four geographical divisions: Cornell and Columbia; Chicago and Wisconsin; Berkeley and Stanford; Johns Hopkins and Maryland; and the National Museum. The results were analyzed for comparison: (1) among individual institutions, (2) between public and private institutions, (3) between geographical areas, (4) between the sexes, (5) between different university ranks, and (6) between different fields in biology. Summary and conclusions were made for each division of comparison.

Roe, Anne. "Analysis of Group Rorschachs of Physical Scientists," Journal of Projective Techniques, 14:385-98, 1950.

Part of an extensive study of relationships between personality and vocation, focusing on clinical studies of individuals eminent in various scientific fields. Subjects tested were sixty-five physical scientists from six institutions: (1) University of California, (2) Cal Tech, (3) University of Chicago, (4) Columbia, (5) Cornell, (6) MIT. The article also includes nine tables of comparison-summaries of subgroupings within physical scientist heading, composite Rorschach psychogram and summary of personality traits indicated, composite Rorschach psychogram for a group of biologists made earlier, and comparison of physical scientist group and biologists.

Roe, Anne. "A Rorschach Study of a Group of Scientists and Technicians," Journal of Consulting Psychology, 10:317-27, 1946.

Initial study in an attempt to investigate the personality structure of scientists and interrelationships between personality and vocation. This study consists of an analysis of group Rorschachs given to men engaged either as scientists or technicians in paleontology as a vocation (sixteen scientists and nine technicians in this study). Most of article is concerned with the Rorschach tests and results. Concluding discussion states and elaborates findings that at the scientific and the technical level, paleontologists as a group show definite characteristics of personality structure.

Roe, Anne. "Group Rorschachs of University Faculties," Journal of Consulting Psychology, 16, 1:18-20, 1952.

An analysis of data previously reported in three papers as parts of extensive study in which faculties of biological, physical, and social sciences were considered separately and compared. The results on all of these groups were combined to provide a comparison group for other workers.

Roe, Anne. "Psychological Examination of Eminent Biologists," *Journal of Consulting Psychology*, 4, 13:225-46, 1949.

An attempt to isolate common features in biologists' personity structure which set them off from other groups and to investigate relations between personality and vocational choice and performance. Results: Wide individual differences on all tests--Rorschach, thematic apperception test, and a verbal-spatial-mathematical test.

Roe, Anne. "Psychological Tests of Research Scientists," *Journal of Consulting Psychology*, 16:492-95, December, 1951.

Comparisons of test results on a verbal-spatial-mathematical test and the Rorschach and the thematic apperception test given to sixty-one eminent research scientists. Reports interrelations between tests used in a research project extending over a three-and-one-half-year period concerning the clinical study of eminent research scientists of various fields.

Rosenhaupt, Hans. *Graduate Students' Experience at Columbia University 1940-1956*. New York: Columbia University Press, 1958. 129 pp.

A massive study covering over 20,000 graduate students who attended Columbia between 1940 and 1956. It presents important basic facts about the graduate student such as his origins, his career, his success, his failures. These are presented along with a chapter on the functions of a graduate school.

Rosenhaupt, Hans. "Graduate Education," *American Education Today*. Edited by Paul Woodring and John Scanlon. New York: McGraw-Hill Book Co., Inc., 1960. 292 pp.

Reports that while growth in graduate education is occurring everywhere, powerful factors restrain it. Ignorance of simple facts about graduate education on the part of graduate school faculties is one of these factors. This is due to the professors' preoccupation with their own disciplines. Other problems discussed include: foreign language requirements, poor undergraduate preparation, length of time spent on earning the Ph.D. The chances for significant changes in graduate education are many, but these changes will be slow.

Scheffler, Israel (ed.). *The Graduate Study of Education*. Cambridge, Mass.: Harvard University Press, 1965. 95 pp.

A report of the Committee on the Graduate Study of Education at Harvard. In the preface Dean Sizer states that the report

"...speaks to Harvard and presumes no more; yet it does speak, if with restraint, to the general question of how the study of education might be construed elsewhere." The report disavows education as a distinct science. Emphasizes the need for four main types of programs: (1) master's, (2) doctor's, (3) postdoctoral, and (4) non-degree. It recommends: (1) reduction or abandonment of commitment to the existing master's degree in favor of a "clinical" master's; (2) that students inclined toward an academic discipline be channeled toward the Ph.D., and those whose interests are in application be channeled toward the Ed.D. degree, with no distinction in quality or substantive differentiation; (3) integration of common elements through a schoolwide colloquium; (4) annual postdoctoral fellowships; (5) an increase in the number and nature of non-degree institutes for special purposes or urgent social problems relevant to education. It stresses the need for improved teaching at this level.

Seeman, Melvin and John W. Evans. "Apprenticeship and Attitude Change," American Journal of Sociology, 67:365-75, January, 1962.

A report on the medical internship as one example of the process of socialization into the professions, and the changes which occurred in the status attitudes of a group of interns over a year of internship. These changes are interpreted in their significance for three major sociological concerns: (1) understanding reference group processes in professional socialization, (2) effect of status attitudes upon professional performance, and (3) the putative long-term trend from status-centered to team-oriented organization.

Seiber, S. D. and Paul Lazarsfeld. The Organization of Educational Research. New York: Columbia University Bureau of Applied Social Research. Cooperative Research Project 1974, 1966. 113 pp.

A comprehensive study of: (1) the value climate arrangements for research, (2) recruitment policies and joint arrangements with other substantive areas, (3) structure of research units, (4) the leadership and/or managerial role of the research director, (5) problems of service involvement and relationship to research conception, and (6) graduate programs for careers in research. It offers important recommendations for improving the quality of graduate programs leading to research careers and for more effective organization of research training experiences and programs.

Sheehan, Sister Helen. "The Catholic College and the Ph.D.," Catholic Educational Review, 55:258-61, April, 1957

This article reports a followup study of the graduates of Catholic women's colleges who continued their education to the Ph.D. between 1936 and 1950. The purpose of the study is to assess the higher educational productivity of Catholic colleges.

Smith, E. D. "The Education of Professional Students for Citizenship." Report of Proceedings of Inter-Professions Conference on Education for Professional Responsibility, Education for Professional Responsibility. Pittsburgh, Penn.: Carnegie Press, 1948. 205 pp.

Reports that engineering is one of the few professions the education for which has remained consistently undergraduate. General and professional courses have been taught in parallel and have little contact between them. Interest in professional courses overshadows and saps the vitality of non-professional courses. Interest in humanistic and social subjects is washed away with the professional internship. As long as general and professional education are taught apart, there is no assurance that students will think analytically and thoroughly in dealing with human and social problems. Content and method are inextricably interrelated.

Smith, Harvey L. "Contingencies of Professional Differentiation," American Journal of Sociology, 63:410-14, January, 1958.

A study of the "modern profession" as a complex social institution. It discusses the various influences operating on and within and at various levels of the profession. It discusses some problems involving institutional integration and adaptation, indicating the need for further study. Calls for studies on the meanings of professional skills and their place, rather than technical function, in determining a profession's social organization.

Smith, Thomas V. "Domain of Graduate Study," Graduate Journal, 2:20-33, Spring, 1959.

A discussion of conditions required for: (1) development of creativity by instruction and study which permit full play of the creative subconscious, (2) opportunities to learn to trust judgment, (3) development of independence, and (4) "trust in the imagination."

Stecklein, John E. Analysis of Applications to the University of Minnesota Graduate School. Minneapolis, Minn.: Bureau of Institutional Research, University of Minnesota, 1963. 49 pp.

Analyzes characteristics of graduate school applications, admissions, rejections, and registrations. Shows trend in selectivity, diversity in applicants' background, major area of academic interest, and persistence in the degree program.

Stewart, Morris A. "The Organization of the Graduate School," *Journal of Higher Education*, 30:136-40, March, 1959.

A proposal by the former dean of the Graduate Division of the University of California, Berkeley, that all graduate education, except for law and medicine, be administered by a single graduate school under a single graduate dean and committee of faculty. Undergraduate and graduate faculties should not fall under formal distinction. The author discusses the organizational framework and roles of departments, faculties, and the graduate dean. The latter should have broad responsibilities and administer them as a graduate dean rather than "a glorified clerk or an exalted policeman."

Strauss A. and Lee Rainwater. *The Professional Scientist*. Chicago: Aldine Publishing Co., 1962. 282 pp.

An extensive survey of professional education patterns among the various scientific fields with emphasis on chemistry. Chapters VII and XI discuss professional morale, public perception of chemists, professional status and organizations, research, and the relationship of the university and the professional scientist.

Strauss, S. "On Research Ability in Graduate Students," *Journal of Higher Education*, 32:443-48, November, 1961.

A study of the indices of research ability in graduate students as perceived by their professors. Drive, perseverance, intellectual ability, strong interests, curiosity, and industry were traits most commonly sought. Social science professors stressed imagination and thoroughness as desirable research traits, while natural scientists emphasized industry, curiosity, initiative, manipulative skill, and ability to work independently.

Strauss, Samuel and Henry Brechbill. "Traits of Scientists," *Science Education*, 43:35-41, February, 1959.

An article reporting the results of an interview study of thirty biological and thirty social scientists who had completed a doctoral program in 1957. Interview questions were standardized in informational categories of vital statistics, their doctoral programs, educational background, and questions concerning the development of interest in their fields and their relationships with people.

Strothmann, Friedrich W. (ed.). *The Graduate School Today and Tomorrow.* The Committee of Fifteen. New York: Fund for the Advancement of Education, 1955. 42 pp.

A work based on a concern that the future quality of graduate education and its schools will suffer under the overwhelming demand for college education from the coming generations of students unless there is a readjustment in graduate education to produce college teachers of sufficient quality and quantity. Key problems facing graduate education are discussed and solutions advanced. A major report.

Struit, D. B., et al. Predicting Success in Professional Schools. Washington, D.C.: American Council on Education, 1949. 187 pp.

Analysis of most significant research studies pertaining to prediction of success in several professional colleges. Most of these studies pertain to correlation between intellectual factors and success in professional studies. It cites the influence of non-intellectual factors. The prediction techniques are: personal history data, previous educational records, scholastic aptitude tests, scholastic achievement tests, special aptitude tests, personality and interest factors, and combinations of predictive factors.

Super, Donald E. and Paul B. Bachrach. Scientific Careers and Vocational Development Theory. New York: Bureau of Publications, Columbia University Teachers College, Columbia University Press, 1957. 135 pp.

An assessment of the studies made to determine the characteristics of natural scientists, engineers, and mathematicians. An evaluative summary of research results and research methods used as related to present theory of vocational development. Excellent bibliographical material which includes 229 items.

Symposium on Continuing Education in the Professions (October 25, 1961). Continuing Education in the Professions. British Columbia: Department of University Extensions, University of British Columbia, 1961. 62 pp.

Presents the premise in Part I that an organized profession really represents a social contract. In a talk on the role of university extension in liberalizing continuing education of professionals, Paul Sheats points to specific examples, especially at the University of California. He notes that the professionally oriented postgraduate conference can bring together scholars from many disciplines to discuss matters of public and academic importance. Part II covers two important aspects of continued education for the professional, which are: (1) increasing rate of our acquisition of knowledge, and (2) education of professionals as persons (general liberal education). Emphasizes the need for a

reexamination of what is educational, what is vocational, and what is professional in up-to-date terms.

Thistlethwaite, Donald L. "College Environments and the Development of Talent: Characteristics of Colleges Are Related to the Percentage of Graduates who Attain the Ph.D.," Science, 130:71-76, July 10, 1959.

Presentation by associate director of research at National Merit Scholarship Corporation of findings from comparative study of colleges with "equally talented student bodies" and their efforts to motivate students to continue on to the doctorate. Patterns of productivity differ for the natural sciences as compared to the social sciences. The productivity of the college is assessed according to the type of institution, faculty, religious affiliation, and geographical location. Information on faculty behavior, received from student informants, was used to compare faculty behavior in unproductive and productive colleges. Significant differences point out the valuable role of faculty in stimulating or inhibiting student achievement.

Towle, Charlotte. The Learner in Education for the Professions. Chicago, Ill.: University of Chicago Press, 1954. 432 pp.

Considers some common concerns in all professions: improvement of curriculum, instructional materials and procedures, methods of student appraisal, reexamination of student recruitment and selection processes, and counseling and guidance procedures.

U.S. President's Science Advisory Committee. Panel on Basic Research and Graduate Education. Glenn T. Seaborg (chairman). "Scientific Progress, the Universities and the Federal Government," Higher Education, 17, 4:3-17, December, 1960.

Report of the committee on problems centering on the advancement of science by basic research and graduate education. The approach to the problem was to determine the fundamental character of the environment necessary for producing good young scientists and scientific progress, and how environmental factors are related to policies of universities and the federal government. Recommendations were made for expedient increase in federal support for research, particularly over long terms and broad objectives, with responsibilities left to the universities for research operations.

U.S. President's Science Advisory Committee. Panel on Science and Engineering Education. Lee A. Durbridge (chairman). "Education for the Age of Science," Washington, D.C.: U.S. Government Printing Office, 1959. 37 pp.

Discussion of the need for improving teaching and learning of science to develop national resources of scientists and engineers. Recommendations: (1) encouragement of interdisciplinary research, (2) higher production of Ph.D.'s and improvement of graduate departments and education, and (3) review of policies for federal support of research and research methods. in order to attract and retain better faculty and achieve more effective education of students.

Walters, Everett (ed.). Graduate Education Today. Washington, D.C.: American Council on Education, 1965. 246 pp.

A comprehensive set of essays by thirteen graduate deans on the current status of graduate education. The Ph.D. degree is required for college teaching, but the graduate school has failed in its sponsorship of a doctorate oriented toward research. Poor undergraduate education is an inevitable consequence. Major problems of the graduate school are discussed at length: (1) Rising enrollment, (2) financial assistance for the graduate student, (3) increasing demands on resources, and (4) revolutionary changes in state of knowledge. Excellent discussion of the problems and trends in the major disciplines.

Walton, John C. and H. P. Hammond. Graduate Work in Universities and Colleges in the United States. Washington, D.C.: Government Printing Office, 1936. 113 pp.

A survey undertaken during the period of readjustment in engineering graduate education, using the method of a comprehensive questionnaire prepared by the committee on graduate work of the Society for Promotion of Engineering. It is an excellent discussion of interpretation of the survey as to problems of administration, teaching staff, teacher selection, subsidized graduate work, and cooperation among institutions. Problems of functional aim of graduate work, language requirements, teaching loads, and evaluations are reviewed.

Weaver, John C. "Federal Aid to Research and Graduate Education," Journal of Higher Education, 30:146-54, March, 1959.

Points out possible dangers in research and fellowships sponsored by government agencies in terms of: (1) imbalanced allocation of university funds and imbalance of academic enterprise; (2) loss of academic freedom in faculty research; (3) conditions unfavorable for developing creativity in graduate students; and (4) difficulties in retention of outstanding scholars and teachers. Recommendation is for "block grants" to be made to universities to use at their own discretion, and to find means of strengthening university resources in fellowship programs rather than "thinning them out."

Western Interstate Commission for Higher Education. *Draft Report on Graduate Education and the West*. Boulder, Colorado: University of Colorado, June, 1963. 28 pp.

Reports that the graduate school has become the main site of preparation for our college teachers, for research specialists in every field of science, and for an increasing number of professionals in other fields. The importance of graduate education can be measured in several ways: its contribution to economic development, its contribution to the defense of the nation, its development of the creative scholar-teachers, its contributions of ordered change in the interest of human welfare in a free society, its contribution to individual opportunity. Western graduate education, like Western population, college enrollments, and per capita income, is ahead of the national average in growth. Western graduate education has special characteristics: it is advanced, research-oriented, specialized, costly. Major problems of graduate education in western institutions are: diverse demands, competition for talent, rising costs, balance among disciplines, quality in quantity. The next ten years will see changes in graduate education.

Wilensky, Harold L. "The Professionalization of Everyone?" *American Journal of Sociology*, 70:137-58, September, 1965.

Submits the thesis that most occupations never will reach the status of established professions. The increasing tendency to label any development exhibited by an occupation as professionalization only prevents a clear view of the actual forms that these occupations are assuming.

Wilson, Logan. "Emergent Challenges: The State University of the Future," *Graduate Journal*, 2, Supplement:177-92, 1959.

The author predicts that the areas of higher education which will undergo greatest expansion and change will be the graduate division and professional schools. State universities will probably become centers for graduate education and research in the state or region. The state university needs reevaluation in terms of function and structure.

Wilson, Logan. *The Academic Man: A Study in the Sociology of a Profession*. London: Oxford University Press, 1942. 248 pp.

Aims to "present an ordered view of the complex roles and processes in which the academician participates," especially in major universities. What problems face the academic, what are his functions and status, how is his career affected by the social processes of the university?

Wilson, Kenneth. Of Time and the Doctorate: Report of an Inquiry into the Duration of Doctoral Study. Research Monograph No. 9. Atlanta, Georgia: Southern Regional Education Board, 1965. 212 pp.

A study inquiring into ways and means of reducing time lapse between the B.A. and Ph.D. It emphasizes the need to reevaluate graduate education and "tighten up" its machinery. The author states that actual median time for the humanities involves: (1) Sociology - nine years, (2) English - thirteen years, (3) natural sciences - six to eight years, (4) chemistry - four to six years. Seventy-nine per cent of respondents in humanist-social studies favored time reduction, but only fifty-nine per cent did so in the natural sciences.

Wilson, O. Meredith. "The Next Problem of Articulation: The Undergraduate College and the Professional and Graduate Schools," Educational Record, 39:124-30, April, 1958.

States that the undergraduate, professional, and graduate faculties must agree on: (1) the nature and purposes of these components of higher education; (2) the relationship of student aspirations to faculty purpose and curriculum; (3) cultural and preprofessional factors on the undergraduate level; and (4) relating professional education and professional practice.

Wolfle, Dael L. America's Resources of Specialized Talent. New York: Harper and Brothers, 1954. 332 pp.

Informative discussion and statistical information concerning: (1) national supply and demand of specialized talent for present and future; (2) attrition rate in higher education; (3) potential in doctoral students and specialists; (4) relations between undergraduate and graduate fields of specialization; and (5) effective uses of actual and potential supply of specialists.

Woodson, C. G. The Negro Professional Man and His Community. Washington, D.C.: Association for the Study of Negro Life and History, 1934. 365 pp.

A study forming a part of the efforts of the Association for the Study of Negro Life and History to portray the social and economic conditions prevailing among Negroes in the United States since the Civil War. Special emphasis is placed on the physician and lawyer.

EDUCATION FOR THE PROFESSIONS

ARCHITECTURE

American Institute of Architects. Architecture: A Profession and a Career. Washington, D.C.: 1945. 57 pp.

An anthology of articles by officers of selected university and college schools of architecture on various aspects of professional education for architects: curriculum, research, and interuniversity relations.

Association of Collegiate Schools of Architecture. Architecture and the University. Conference Proceedings, Princeton University, December, 1953. Princeton, New Jersey: Princeton University, 1954. 72 pp.

Includes conference points of emphasis concerning policies of admission, the need for flexibility in student selection, and the need for variety of teaching techniques and teaching personnel. One interesting subject discussed was the relationship of the school of architecture and its faculty to the architecture of the university. The faculty is consulted but its recommendations are not necessarily followed.

Bannister, Turpin C. (ed.). The Architect at Midcentury: Evolution and Achievement. New York: Reinhold Publishing Co.,1954. 513 pp.

A comprehensive and informative work on architectural education. Statistical information is presented in a very readable style. An excellent, concise report of summary, conclusions, and recommendations is given in the appendix.

Bosworth, F. H. and Roy C. Jones. A Study of Architectural Schools. New York: Charles Scribner's Sons, 1932. 187 pp.

A major study in professional education, covering all aspects of architectural education. Serves as proof that educational policies and practices haven't changed significantly since 1932 and that problems involved are not unique to architecture. Quantitative rather than qualitative differences appear when findings are compared with present practices and problems.

Caudill, W. "How to Keep Going Forward," Progressive Architecture, 40:13, February, 1959.

Considers the need for continual development after graduation and suggests ways of accomplishing this: (1) seminars for the interchange of ideas, (2) reading, (3) convictions and philosophy on which to base designing, (4) traveling to look at the work of others, (5) interchanging professional information with other

architects, (6) going back to school, and (7) developing a plan for in-service training.

Hamlin, A. "Atelier System in Architecture," Columbia University Quarterly, 11:318-25, June, 1909.

An interesting historical perspective. The author notes that artists generally look askance at university departments of art. The latter undertake the theory, history, and principles of criticism, but leave studio work to painters and sculptors.

Journal of Architectural Education, 15:20-25. Cambridge, Mass.: Association of Collegiate Schools of Architecture, Spring, 1960.

Three articles which stress the need for a broader liberal arts base in architectural education and the need for an interdisciplinary and team approach in the curriculum. Of particular interest is the report of research findings by Claude Winkelhake on "The Meaning of Professional Growth for Architectural Education."

MacKinnon, Donald W. Genus Architectus Creator Varietas Americanus. A paper presented at the 46th meeting of the Association of Collegiate Schools of Architecture, University of California, Berkeley, California, April 22, 1960. 29 pp.

An interesting paper reporting research undertaken to study creative architects in order to discover those characteristics which differentiate highly creative individuals from less creative and original persons.

New Jersey Society of Architects. Education for Architecture. East Orange, New Jersey: New Jersey American Institute of Architects, 1958. 21 pp.

An informative report of the three-day conference on professional education in architecture. Presentations of research papers and discussions covering: (1) education at college level (teaching skills, creativity), (2) education during the intermediate years (need for research, breadth and depth of graduate work), (3) education after registration (professional growth professional communication, exchange of ideas, and curricular evaluation).

Nisot, M. T. "Protection of Professional Titles: I. The Title of Architect," International Labor Review, 41:42-46, January, 1940.

A review of the legal actions taken in some countries to protect professional titles against the competition of amateurs and outsiders.

The professions argue that this protection benefits the public. Contend that the sacrifice they make in terms of time, money, and effort justifies the demands for protection. Most of the countries appear to have done this in the 30's. Estonia also protects the title of artist.

Olsen, Marjorie. A Preliminary Study of the Prediction of Academic Success in Architecture. Princeton, New Jersey: Educational Testing Service, October, 1956. 19 pp.

This report describes the first stage of an extensive program sponsored by the American Institute of Architects for the investigation of test materials which could be developed into a battery predictive of success in architecture. This report involves an analysis of predictive information already in the records of architecture schools and a questionnaire aimed at identifying suitable schools for study.

Panel Discussions of the Annual Convention, 1954. Journal of Architectural Education, 10:1, Cambridge, Mass.: Association of Collegiate Schools of Architecture, Spring, 1955.

A report of discussions, papers, and research findings presented at the annual conference of the association on the problems of architectural education. Recurring themes were: the lack of agreement on curriculum structure between educator and practitioner, the need for better prepared students, the need for educational breadth, and better communication with other departments and disciplines within the universities and colleges.

Pitcher, Barbara, et al. A Study of the Prediction of Academic Success in Architectural School. Princeton, New Jersey: Educational Testing Service, March, 1962. 87 pp.

An exploratory study of the prediction of academic success in twelve schools of architecture. The results suggest that a battery of tests of ability in the verbal, mathematical, scientific, visual phenomena, spatial relations, interest, and idea productivity would be very useful. Of some significance for the study was the high attrition rate at these undergraduate schools of architecture. Tests were administered to 600 students and data collected over a period of five years.

Purves, E. R. Facts About Architecture and Architects. Washington, D.C.: American Institute of Architects, 1954. 16 pp.

A collection of facts about the architect, his professional training, and professional organizations. Most useful as ready background material on architectural subjects. A concise, economical, and useful item.

Purves, E.R. "Architects and the Superman Myth," Architectural Forum, 116:102-5, March, 1962.

Submits the charge that architects are suffering from too much self-esteem and superman notions. This makes coordination of efforts with the construction industry difficult.

Report of Proceedings of the 41st Annual Convention. Journal of Architectural Education, 11:1, Cambridge, Mass.: Association of Collegiate Schools of Architectural Education, Winter, 1956.

Reports the concerns of this conference group with the need to attract more competent teachers of architecture, continuing the professional education of those teachers now in service, and the need to shift the emphasis from specialization to general education for future students of architecture.

Roth, Richard. Your Future in Architecture. New York: Richard Rosen Press, 1960. 157 pp.

A guide designed to assist prospective students in architecture. Chapters I-III discuss architects, architecture, and other relevant professional education.

Spitman, R. "Thoughts on Professionalism," Progressive Architecture, 39:13, August, 1958.

Discussion of the differences between business and profession. Problems of practice in a "sale at any cost" society. Reminder of the ethics of professionalism, i.e., transcendence of monetary rewards.

Weatherhead, A.C. The History of Collegiate Education in Architecture in the United States. A doctoral dissertation completed at Columbia University: published by the author, Los Angeles, California, 259 pp.

Traces the development of collegiate education in architecture through all the important phases and analyzes the conditions and influences which underlie each successive period and the significant features characterizing it. The scarcity of publications in architectural education lends additional value to this book.

"What Sort of Profession?" Economist, 203:376, April 28, 1962. This is a summary of a massive survey entitled The Architect

and His Office, Royal Institute of British Architects, 1962. Prepared by M. Austin-Smith, et al.

Expounds the thesis that the architect has a dual personality: artist and engineer. Issues call to "bring back" the old technical skills into architecture, integrate practice with school courses, and employ techniques to help architects prepare plans.

BUSINESS

"Are Business Schools on the Right Track?" Business Week, April 13, 1957,p.50.

An article reporting the findings of two studies supported by the Ford Foundation and Carnegie Corporation, which surveyed the prerequisites for a career in business.

Carroll, Thomas H. (ed.). Business Education for Competence and Responsibility. Chapel Hill: North Carolina University Press, 1954. 212 pp.

Presents the various viewpoints on the philosophy, curriculum, goals, and objectives of business education. An excellent presentation of the interrelationship between specialization and general education in business.

Clark, John J. and Blaise Opulente. The Impact of the Foundation Reports on Business Education. New York: St. John's University Press, 1963.

Contains well-written and optimistic conclusions: Four years after the ferment created by the reports of Frank Pierson and of Gordon and Howell that curricular changes in business education are becoming more geared to rapid, dynamic changes in society, emphasis is now shifting from narrow specialization to general education designed to cultivate the whole man. Vocationalism is going into an eclipse, and professional schools are more cognizant of the total consequences of the professional businessman in our organizational society.

Copland, Melvin T. And Mark an Era. Boston: Little, Brown and Co. 1958. 312 pp.

Discusses educational policy of the business school with special reference to the Harvard program. Chapters 1 and 2 are very informative.

Gordon, Robert A. and James E. Howell. Higher Education for Business. New York: Columbia University Press, 1959. 491 pp.

Embodies the results of a three-year study of collegiate business education, with prime concern for business education as it is offered by university schools of business administration. Both the undergraduate and the graduate programs are examined along with discussion on students, faculty, teaching, and research.

Gordon, Robert A. "Some Current Issues in Business Education," *California Management Review*, 1:1, Fall, 1958.

An excellent paper which presents some preliminary ideas which were incorporated in an extensive study commissioned by the Ford Foundation and published in 1959. Discusses the problem of diversity in business education and careers, students, and resources. Professional education requires general understanding of structure and functioning of organizations and how they affect the making and implementation of decisions, and skill in interpersonal relations. Stresses need for liberalizing education with specialization reserved for graduate level.

Kozelka, Richard L. "Business, the Emerging Profession," Chap. VIII, *Education for the Professions*, 61st Yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1962, pp. 168-89.

Management, and certain functional specialties within business, have tendencies to professionalization. There seems to be no clear direction in business itself as to correct path to the future of management. Hence, certain recent reports recommend diversity in teaching, as well as upgrading of graduate programs.

Newcomer, Mabel. *The Big Business Executive: The Factors That Made Him, 1900-1950*. New York: Columbia University Press, 1955. 164 pp.

Reports the results of a survey of executives of public utilities, railroads, and industrial organizations at the presidential and board chairmen level. The data were concerned with personality traits, educational background and related factors, and type of institution.

Nickerson, Albert L. "Climbing the Managerial Ladder," *Saturday Review*, 36:38-39, November 21, 1953.

Argument by the vice-president of a major oil company for the necessity of continued extension of a sound liberal education. The ideal product of higher education is moral stamina with the ability to think and discriminate among values.

Pierson, Frank C. *The Education of American Businessmen*. New York: McGraw-Hill Book Co.,Inc. 1959. 740 pp.

An excellent study done as part of the Carnegie Series in American education. The Gordon-Howell report was prepared simultaneously, though separately, and their findings are similar. Pierson proposes dividing the curriculum equally among the humanities, science, mathematics, and social sciences, and devoting the remaining half to business education. He also proposes abolishing language requirements or else requiring them to be developed to a level where language is studied as literature. In business education on graduate level, Pierson proposes a two-year program with the first year devoted to "foundation business subjects" and tools of analyses.

Quigley, John P. The Education of the American Businessman. Unpublished master's thesis, University of California, Berkeley, 1965. 69 pp.

Proposes that: I. Professional education for business fails to develop skills required in the professions, such as: (1) communication skill -- colleges do not correct this deficiency brought to college by students from the high schools; (2) mental skills -- problem-solving, scientific induction; and (3) interpersonal relations -- organizational and leadership skills. II. Greater emphasis is needed on liberal education. III. Education must draw upon all disciplines for breadth.

Analyzes and compares the curricula of law, engineering, and business administration. Concludes business education is the best of the three in terms of providing liberal, professional education.

Richards, C. S. "Graduate Training for Business Management and Administration," National Council for Social Research, Pretoria: Union of South Africa, 1953. 37 pp.

A report by an economist of South Africa of a study made of business education in Great Britain, Europe, and North America. Very interesting from the standpoint of the kinds of perception and insights gained by one who views business education from another culture. A critical examination of the philosophy of business education and teaching techniques employed in American colleges and universities is offered by Professor Richards. Unique in style as well as content.

Senkier, Robert J. Revising A Business Curriculum: The Columbia Experience. New York: Columbia University Press, 1961. 118 pp.

Very informative report of the development of a new Master of Business Administration program. The factors which motivated the need for curricular revision were: (1) Existing program lacked direction, purpose and philosophy clarifying social role, and (2) one out of every six degrees conferred in the U.S. in 1957-58 was in business education. The conclusions resulting from a five-year study pointed to a need for a curriculum offering breadth and analytical complexity to cope with rapid social change. Social change makes traditional courses obsolete before academic preparation is completed. There is need for a common foundation of knowledge and broad understanding of business in its societal role.

Shepherd, David. "Management in Search of Men," Atlantic Monthly, 197:65-66, March, 1956.

This article discusses the prerequisite professional qualities of personnel as outlined by the modern business world.

Shively, Harold. "The Core Curriculum in Higher Education for Business," Journal of Higher Education, 2, 37:88-91, February, 1966.

Argues that the "how" of business administration is learned through experience. The emphasis should be on education for breadth, development of analytical ability, skill in communication, and business judgment. Past emphasis has been on a proliferation of vocational courses that ignore these traits and abilities.

Silk, Leonard S. The Education of Businessmen. Pamphlet No. 11. New York: Committee for Economic Development, 711 Fifth Avenue. 44 pp.

Excellent discussion of crucial questions regarding professional education and its relevancy to life--social, personal, and professional. Analyzes the current state of business education and the problems of professional education. Recommends focus on the need for educational breadth, diversity, flexibility, and quality.

Van Metre, Thurman. The Graduate School of Business. New York: Columbia University Press, 1954. 124 pp.

A history of the Graduate School of Business at Columbia University. The author stresses the need for more effective communication between business and educators in view of the radical social and economic changes in progress and in the future. The author points out danger spots implicit in business education practices.

Whyte, William H., Jr. The Organization Man. Garden City, New York: Doubleday and Co., 1956. 429 pp.

A milestone in reporting sociological aspects of businessmen and business education. Chapters VII and VIII discuss with biting criticism the lack of breadth in present business curricula and the psychological and social consequences of this type of education as reflected in American business and the professional businessman.

CLINICAL PSYCHOLOGY

American Council on Education. A Guide to Graduate Study; Programs Leading to the Ph.D. (Graham, Jane, ed.) Third edition. Washington, D.C.: American Council on Education. 609 pp.

A book intended to assist the undergraduate in planning to meet the requirements for graduate study, to give a realistic view of the educational life of the graduate student, and to provide some basis for making a wise selection of a graduate school. By indicating something of the professional opportunities open to the successful graduate student, it offers encouragement to better undergraduate students to continue their training.

American Psychological Association. "Ethical Standards of Psychologists," American Psychologist, 14: 279-82, 1959.

An ethical code approved by the Board of Directors of the American Psychological Association. Eighteen principles designed to cover most situations where ethical problems might arise in professional experiences.

American Psychological Association. Psychology and Its Relations with Other Professions. Washington, D.C.: American Psychological Association, 1954. 14 pp.

Discussion of the nature of psychology as a profession, its goals and objectives, and the principles governing its relations to other professions.

Blank, Leonard and Henry P. David. "The Crisis in Clinical Psychological Training," American Psychologist 4, 18:216-19, 1963.

Discussion of the acute shortage of doctoral candidates in clinical psychology, of the quality of students who accept internships, and of the intern assignment. Recommends: (1) expansion of present doctoral program, (2) additional training programs with reforms of current master's programs, and (3) experimental development of professional schools.

Blanton, Richard. "Science and Art in the Training of Psychologists," Journal of Clinical Psychology, 18:10-14, January, 1962.

States that continuous conflict about course content and curricula are issues of science. New information wipes out bad science; bad art does not erase easily.

The graduate student comes to advanced training with vague concepts about professional role, responsibility, and image, and with justification. The profession must develop practices, programs, and personnel to aid students.

Clark, K. E. America's Psychologists: A Survey of a Growing Profession. Washington, D.C.: American Psychological Association, 1957. 247 pp.

A study with two distinct aspects. One aspect deals with substantive questions about psychology as a scientific discipline. The other part of the investigation is devoted to matters of psychological personnel and training.

Clark, K. E. and B. V. Moore. "Doctoral Programs in Psychology," American Psychologist, 13:631-33, 1958.

Some simple objective data from questionnaire sources, describing graduate program in clinical or counseling psychology in 1957-58. Trends indicated that: (1) enrollment in graduate schools lagged behind undergraduate level, and (2) since 1955, the number of Ph.D.'s in psychology declined about five per cent each year.

Committee on Subdoctoral Education of the Education and Training Board. "The Training of Technical Workers in Psychology at the Sub-Doctoral Level," American Psychologist, 10:541-45, 1955.

A discussion of factors involved in the need for both doctoral and subdoctoral educational programs in psychology. Studies indicate: (1) A large part of psychological work is done by technicians and personnel with less than the doctorate. (2) Many institutions do not offer doctoral programs. (3) The number admitted to subdoctoral programs has increased twelve per cent since 1953. (4) The number admitted to doctoral programs has been declining.

This article recommends: (1) appropriate distinctions as to role and title between doctoral and subdoctoral degrees, (2) fullscale study of recruitment and selection of graduate students in psychology, (3) discouraging teaching specialized technique courses at undergraduate level, (4) encouraging colleges and universities to emphasize a broad undergraduate education in selection of graduate students in psychology, and (5) extending training programs at subdoctoral level to two years.

Conference on Graduate Education in Psychology. Graduate Education in Psychology. A report prepared by the Editoral Committee, Anne Roe (chairman) et al. Washington, D.C.: American Psychological Association, 1959.

An excellent, comprehensive view of professional education in psychology on the graduate level, covering all aspects. Concludes: (1) Foreign language is not necessary for a graduate training requirement. It must be studied in depth. International communication is needed. (2) Research is characterized by inbreeding in training psychologists. Education must be for competence in meeting unforeseen problems. Doctoral dissertation should be directed by those experienced in research. Methodology and statistics courses are unsatisfactory. Agrees intuitive skill of a researcher is more valuable than statistics. Most fruitful research training is apprentice work with faculty member.

Recommends that: (1) "clinical psychologist" be used for persons with doctorate in clinical psychology, (2) degrees and titles for subdoctoral (two-year non-doctoral) training programs be organized for specific kinds of work, rather than as steps toward the Ph.D. (note: American Psychologist December, 1958, reports M.A. in psychology with twenty-eight majors), (3) greater flexibility and innovation, and (4) closer cooperation with other disciplines, especially education. Other disciplines need specialists in psychological aspects of the discipline. New psychological specialties are not developing independently of the discipline of psychology. A close tie to the basic department of psychology is necessary.

Daniel, R. and C. Louttit. Professional Problems in Psychology. New York: Prentice-Hall, 1953. 416 pp.

A book aimed at graduate students in psychology. Professional and scientific training in psychology has, for many years, required work beyond the bachelor's degree. The percentage of APA membership holding Ph.D's has declined. The decrease is due in part to the increasing number of people employed as psychologists in other than academic positions. The amount of training is a subject of considerable discussion. Official opinion is that the Ph.D. should be necessary for professional psychologists.

Treats problems of overlap and repetition of topics in courses on undergraduate level. Requirement for admission to graduate work ranged from non-specified to thirty-one semester hours credit, with median of eighteen semester hours. Main defect in the beginning graduate is lack of breadth of educational experience, with weakness in math and natural and social sciences. Argues for professional programs at a post-bachelor level to be developed for applied fields leading to professional degree other than Ph.D. The American Psychological Association opposes this. A list of twenty-eight different employment positions is given on page 251.

Fine, Harold J. "The Status of the Clinical Psychologist," Journal of Clinical Psychology, 17:107-10, 1961.

Critical analysis of training program's inadequacy, recalling that studies indicate more than 50 per cent of those in the field are dissatisfied. Morale is generally low. "Training programs at many universities are still largely inadequate with poorly trained clinicians running them, who, themselves, have had a bare minimum of clinical skills and training and experience."

Gluck, Martin R. and Alan O. Ross. "Some Training and Occupational Characteristics of Recent Ph.D.'s in Clinical Psychology," Journal of Clinical Psychology, 21:80-85, January, 1965.

A study designed to identify the variables involved in training clinical psychologists after the scientist-practitioner model in: (1) areas of choice of dissertation topics and (2) patterns of relations between doctoral research and postgraduate job functions. Another important objective was to determine the value of the internship which is deemed a crucial experience in the findings of the study. It was learned that the later in his graduate years a student took his internship, the more likely he was to choose a dissertation topic in areas other than clinical or personality. This study raises a number of questions regarding the quality of professional preparation and how the responsibilities of clinical training programs are being met.

Goldstein, Fred J. "Guidelines and Obstacles in Training for the Profession of Psychology," Journal of Clinical Psychology, 18:248-52, July, 1962.

A very readable article in which the author presents issues in "once-upon-a-time" story form called "Psycholandia: A Contemporary Fable in Clinical Psychology." Describes intra-professional conflicts and division of labor. Proposes guidelines based on pragmatic aim to create a training program to develop a clinician who would function professionally on the best available knowledge.

Jones, Marshall R. and David Levine. "Graduate Training for Community Clinical Psychology," American Psychologist, 4, 18: 219-33, 1963.

Discussion of graduate training programs with special reference to those at the University of Nebraska, which are designed to train the psychologist for educational breadth and for research in order that he may better adapt to the roles demanded by the various needs of the community.

Lubin, Bernard. "Survey of Psychotherapy Training and Activities of Psychologists," Journal of Clinical Psychology, 18:252-56, July, 1962.

Results of a one-third random sample of APA Directory, 1959, surveyed by mail questionnaire concerning psychotherapy training and activities. Characteristics of the 72 per cent who responded are described. Among the more salient findings were that the respondents had extensive supervised experience in individual methods of treatment and contact with adult patients.

Moore, Bruce V. "Educational Facilities and Financial Assistance for Graduate Students in Psychology: 1959-60," American Psychologist, 13:741-60, 1958.

Listing of institutions with graduate programs in psychology with information supplied by respective departments. The article offers no evaluation of the programs except those doctoral programs in clinical area in counseling psychology which are indicated as approved by the American Psychological Association. Advice to applicants for financial assistance and admission is offered.

Raimey, Victor (ed.). Training in Clinical Psychology. New York: Prentice-Hall, 1950. 253 pp.

Report of Conference on Graduate Education in Clinical Psychology held at Boulder, Colorado, in 1949 by the American Psychological Association. A definitive account covering all aspects of training. Lists fourteen characteristics of educational programs deemed desirable and defines by areas of study rather than by levels of training: (1) general psychology, (2) dynamics of human behavior, (3) related disciplines, (4) diagnostic methods, (5) therapy, and (6) research methods.

Roe, Anne. "Analysis of Group Rorschachs of Psychologists and Anthropologists," Journal of Projective Techniques, 16:2, 212-24, 1952.

Data derived from administration of Group Rorschachs to seven faculties in psychology (California, Chicago, Columbia, Iowa, Harvard, Michigan, Ohio) and five in anthropology (California, Chicago, Columbia, Harvard, Michigan). Part of a series of studies in various scientific fields concerned with relationships between personality and vocation. Data not extensively verbalized. Presented in summary tables.

Rogers, Carl R. *Graduate Education in Psychology: A Passionate Statement*. LaJolla, Cal.: Western Behavioral Sciences Institute, 1964.

A critical statement concerning the educational policies which are operative in some departments of psychology in their graduate training programs. The author states that there is great difference between what the discipline *professes* and what it *does* in training psychologists. Analyzes the implicit assumption underlying the treatment of graduate students and suggests an alternative list of principles upon which a more enlightened graduate program might be based.

Ross, Sherman and R.F. Lockman. "Survey of Graduate Education in Psychology," *American Psychologist*, 19:623-28, August, 1964.

Discussion of problems in psychology: (1) perceived cleavage between science and the profession, (2) extensive demands for psychological services, (3) aspirations of psychologists.

This article reports the findings of a survey designed to show the contemporary picture of graduate study in psychology, degrees granted by largest departments, departmental comparisons over the last decade, etc. Excellent statistical data.

Snyder, William O. "Professional Training for Clinical Psychologists: A Synthesis of a Symposium," *Journal of Clinical Psychology*, 18:243-48, July, 1962.

A synthesis of major points covering the topics: (1) difficulties with present training, which is regarded as paradoxical, ambiguous; (2) problems in research training--questions of appropriate kinds of research, students with little aptitude or interest being forced into research; (3) problems in training psychotherapists; and (4) new perspectives in postdoctoral training. Dr. Martin Mayman proposes intensifying both aspects of clinical training at advanced levels of education and training.

Taylor, Donald W., et al. "Education for Research in Psychology," *American Psychologist*, 14:167-79, 1959.

A report of the education and training committee on education for research in psychology, which concludes: (1) The productive man in research is often narrow and preoccupied with his own ideas, unsystematic in his methods or in studying the literature, and his productivity is the result of his willingness to follow his hunches. This is in contrast to the stereotype of the scientist as one who begins with a thorough knowledge of the field, is systematic in his methods, and open-minded in observations and is responsive to opposing evidence or cogent argument. (2) Characteristics which make for inventiveness and originality bear little relation to those developed by formal course work. (3) Value of standardized training procedures is questionable. (4) The only adequate index is the eventual productivity of the department. (5) Apprenticeship is the most important part of education for research.

Tyler, Forest B. "Integrating Scientific and Professional Training at the Graduate Level," Journal of Clinical Psychology, 19:116-19, January, 1963.

Description of a special program conducted at a state hospital in efforts to reintegrate abnormal psychology and clinical psychology into an internship for advanced training of the psychologist in which he is exposed to a wide variety of activities.

Watson, Robert I. Psychology as a Profession. Garden City, New York: Doubleday and Co., Inc., 1954. 65 pp.

Describes the development of the professional psychologist in the community, reviews the intraprofessional and interprofessional problems and solutions, and provides a perspective for assessing more readily the psychologist's potential as a community resource.

Webb, W. B. (ed.). The Profession of Psychology. New York: Holt, Rinehart and Winston, 1962. 291 pp.

A panorama of psychology which describes the actions of psychologists in context. Chapter III is concerned with training. In 1954, sixty to seventy per cent of first-year graduate students were undergraduate majors in psychology. Twenty-five per cent were undergraduate majors in the humanities. The psychology undergraduate "major" is not clearly defined.

The median time between the bachelor's and the master's degree is approximately three years, and the median between the bachelor's and the doctor's degree is approximately seven years. For the Ph.D., three years of full-time study beyond baccalaureate is a minimum requirement, with the four-year program more frequent, and five years not unusual. A conference in 1958 on the Ph.D. as a research degree concluded that the best training for research was a type of apprenticeship.

DENTISTRY

Bleuett, Edward. "Educational Needs of Dental Students Toward Dental Public Health," Journal of Dental Education, 29:102-6, March, 1965.

Gives four objectives which should serve as guides in developing an adequate program of instruction: understanding public health, understanding dental public health, understanding the way of life in American communities, and understanding interpersonal relations.

Burket, Lester. "Changing Dimensions in Dental Education," Journal of Dental Education, 23:81-94, June, 1959.

Outlines several acute problems in dental education: shortage of well-qualified teachers, low number of qualified applicants. In the future the educational approach in dental education will be more patient centered.

Carlos, James. "Electronic Computers in Dental Education and Research," Journal of Dental Education, 28:415-21, December, 1964.

Discusses electronic computers as they are related to dental education and research. Author reports on the use of computers in dental institutions as of early 1963 and presents examples of their application.

Carson, R.L. "Selection of Dental Students," Journal of Dental Education, 29:202-7, June, 1965.

A study concerned with testing reliability of the variables often employed in selection of dental students. Each school needs to undertake a serious study of its selection procedures.

Clark, Henry. "A Challenge to American Dentistry," Journal of Dental Education, 28:381-7, December, 1964.

Suggests ways to fulfill some of the demands that society makes of a health profession.

Dental Education and Manpower. A report of the Coordinating Council for Higher Education. Sacramento and San Francisco, California, December, 1964. 22 pp.

A well-documented report on the supply and demand of California dentists, with recommendations made to the Regents of

the University of California for specific improvements for development of graduate and professional programs for meeting future needs. The report discusses problems of licensure, public dental health, and other problems confronting dental education nationally.

Douglas, Bruce. "A Survey of Views on Pre-Dental Education," Journal of Dental Education, 24:191-96, September, 1960.

A study based on data from questionnaires to faculty members in schools of dentistry. The majority of respondents favored continuation of present predental requirements of the Council on Dental Education with some exceptions. Most agreed that a broad liberal arts education is important in the development of the student.

Douglas, Bruce. "A Survey of Changes in Curriculum Content in American Dental Schools Since 1935," Journal of Dental Education, 22:177-82, March, 1958.

A report of findings of a survey from the author concludes that curricular changes since 1935 are very noticeable in meeting the challenges of changing times and reflecting social conditions. In the survey the author compares dental school catalogs with recommendations made periodically by the Curriculum Survey Committee.

Fleming, Willard. "Review of the Historical Development of Dental Education Requirements," Journal of Dental Education, 29:142-45, June, 1965.

Reviews the development of dental education requirements and shows clearly that, as progress has been made, liberalization of the requirements has taken place. Author also considers areas of the profession in which liberalization and curricular reforms would be of marked value.

Friedrich, Rudolph H. "Three-Year Study of Pre-Professional Education, Student Recruitment and Admissions Problems," Journal of Dental Education, 29:387-96, December, 1965.

Research results showing some weaknesses in the areas indicated in the title. The author presents solutions which might well be applicable to every dental school. He points to the need for stronger academic preparation for dental students, qualified faculty, and communication among professional organizations, alumni, and college advisers.

Galagan, Donald J. "Innovation in Dental Education," Journal of Dental Education, 28:393-96, December, 1964.

A paper discussing problems in dental education and new educational approaches to their solution: (1) making research in education a part of an undergraduate dental school, (2) continuing education for practicing dentists, and (3) prepaid dental services program.

Gardner, Alvin F. "Education of Dental Students," Journal of Dental Education, 29:364-68, December, 1965.

A discussion of the aspects of dental education that need improvement if the educational program is to produce qualified future dentists. Attracting quality students and faculty and improving administration, faculty, and student relationships are critical.

Heist, Paul. "Personality Characteristics of Dental Students," Educational Record, 41:240-52, July, 1960.

A study conducted at the Center for the Study of Higher Education at the University of California. The author reports the findings in this article and reviews some of the major psychological characteristics of dental students which are of significance for professional education and careers.

Heller, D. B., et al. "Selection of Students for Dental Schools," Journal of Dental Education, 29:20-25, June, 1965.

A study concerned with testing the reliability of variables that often are employed in selecting dental students. It also strongly suggests that each institution should undertake a program of self-analysis regarding selection procedures, because national norms or data from some institutions have no carryover value of reliability to other institutions. Excellent statistical reporting of the data.

Hollinshead, B. Survey of Dentistry. Final Report: Commission on the Survey of Dentistry in the United States. Washington, D.C.: American Council on Education, 1961. 603 pp.

A comprehensive survey conducted by the American Council on Education and the related professional organizations of dentistry for the purpose of compiling data on problems and attitudes in dental education as they concern: (1) questions requiring group action or public measures for all aspects of public dental health, (2) relations between dentist and patient (fees, licensure, auxiliary personnel, health institutions, etc.), (3) professional education as it relates to the questions outlined above, (4) research to determine if enough time and energy is expended in relation to other health fields, public dental care and the future of dental research. Interesting and readable.

Kesel, Robert G. "Survey of Dentistry and Dental Research," Journal of Dental Education, 23:129-34, March, 1959.

A paper primarily concerned with a discussion of the Survey of Dentistry made by the American Council on Education, in which the author was in charge of studies concerned with research in dentistry. Considers the work of the survey to date in its analysis of dental research.

Kirk, Barbara, et al. "Personal and Vocational Characteristics of Dental Students," Personnel and Guidance Journal, 41:522-27, February, 1963.

An article describing personal and vocational characteristics of students as derived from a study employing tests given to predict faculty ratings of professional integrity and assess ethical behavior. Tendencies and characteristics are clearly differentiated among the University of California dental students who served as the subjects for the study.

Land, Melvin. "Psychological Tests as Predictors for Scholastic Achievement of Dental Students," Journal of Dental Education, 27:25-30, March, 1963.

A study indicating that dental school admissions activities could benefit and improve by employing psychological tests. Dentistry profession is being "flooded" with misinformation of a psychological nature. American Psychological Association studies report that one-half of the accredited dental schools use psychologists in testing, counseling, and therapy. Medicine has explored and documented quantities of data on personnel, curricula, training, teaching of psychology; dental schools have not.

Manhold, John H., et al. "Preliminary Study of the Efficacy of the Dental Aptitude Test in Predicting Four Year Performance in Dental School," Journal of Dental Education, 27:84-87, March, 1963.

A study showing the results on prediction value of the dental aptitude test for success in dental school as positive. Scores were obtained on seventy-one students, showing that coefficients of correlation between grades received in manual and theoretical aspects were well above .01 level of confidence.

More, Douglas M. "The Dental Student," American College of Dentists Journal, 28:393, March, 1961.

A very informative issue of this quarterly journal devoted to the reporting of findings of studies concerned with the dental student. Some studies are: (1) survey of entering dental students, (2) background characteristics, (3) social origins of future dentists, (4) personality patterns of entering dental students, and (5) dentistry and manpower resources.

More, Douglas M. and Nathan Kohn, Jr. "Some Motives for Entering Dentistry," American Journal of Sociology, 66:48-53, July, 1960.

Results of a questionnaire and some interviews of about 3,600 students entering dental school. They were utilized to determine the importance of five aspects of dentistry (prestige, money, service, autonomy, and opportunity to do manual skills). The conclusion is that optimum interest in dentistry has a balanced pattern of these motives (although they fit most any profession), with the desire of autonomy or independence of authority the uppermost.

Nedelsky, Leo. "Some Educational Principles in Designing a Dental Curriculum," Journal of Dental Education, 25:213-19, September, 1961.

An article concerned with the formulations of objectives in the dental curriculum and with evaluation.

Randolph, Kenneth. "A Projection of the Dental Curriculum in 1975," Journal of Dental Education, 29:133-41, June, 1965.

Considers some of the factors responsible for producing changes in the dental education curriculum and the resultant curricular modifications which probably will occur in the next decade. The author predicts that changes will be slow in coming in: (1) patterns of practice, (2) student caliber, (3) licensure, and (4) research interests.

Reilley, Robert, et al. "The Dental Student at the University of Illinois," Journal of Dental Education, 29:162-74, June, 1965.

Data compiled from open-ended questionnaires and psychological inventories, permanent records from registrars' offices, and unpublished data from the Commission on Survey of Dentistry. The study emphasizes the point that local influences may strongly affect background, experience, career plans, and personalities of dental students.

Rosenberg, Jack L. "Attitude Changes in Dental and Medical Students During Professional Education," *Journal of Dental Education*, 29:399-403, December, 1965.

A study showing that the dental student undergoes changes during his professional education period that reflect poorly on the educational system. The author points out the need for institutions to undertake a self-study and reexamine their programs to determine factors responsible for these adverse changes. Excellent reporting of data and summary discussion.

Schour, Isaac. "Changing Concepts in Dental Education," *Journal of Dental Education*, 29:149-54, June, 1965.

Describes a new set of goals for dental education based upon a number of studies of educational research and a comparison of professional literature during the past decade. Goals include: shifts of emphasis from the mechanical aspect of dental education (the tooth) to the patient, introduction of the social concept of dental education, and achievement of good teaching as a result of staff development rather than happy accident, with resulting faculty and graduate research. The dental student is to be: (1) clinically and technically competent, (2) biologically oriented, (3) socially sensitive and responsible, and (4) humanistically integrated for continuous growth.

Sciaky, Inc. "Changing Concepts about the Dental Curriculum," *Journal of Dental Education*, 27:16-21, March, 1963.

In essence, a duplicate of a paper prepared by the author for the World Health Organization Expert Committee on Dental Health in Geneva, July-August, 1962. It discusses several new ideas on certain changes that should be considered for the dental curriculum.

Sherman, Granville. "Dental Practice: Impact on Curriculum," *American College of Dentists Journal*, 31:229-33, October, 1964.

A brief discussion showing the influences on curriculum exerted by private practice of dentistry. The author submits that if dentistry is to improve as a health profession, improvements must come from better dental education and better dental practice--they are mutually influential.

Stein, Leonard. "The Liberal Education of the Dentist," *American College of Dentists Journal*, 31:199-211, October, 1964.

Sees danger in the professional school in that it is *so* good that it is coming to be regarded educationally as an end, rather than a beginning. He stresses the need for awareness of two forces for change: (1) human beings' normal urge to grow and learn to cope with change and (2) the necessity to learn how to make decisions rather than merely acquire information.

Terkla, Louis G. "Advantages and Disadvantages of Introducing the First-Year Student to Clinical Dentistry," Journal of Dental Education, 28:410-14, December, 1964.

States that although periodically dental schools have introduced first-year students to clinical areas, results of the procedures have not been well documented. Presents an analysis of a program undertaken at the University of Oregon Dental School sixteen years ago.

ENGINEERING

American Society for Engineering Education. General Education in Engineering. Urbana, Illinois: American Society for Engineering Education, 1956. 122 pp.

A report of a humanistic-social research project conducted by eighteen engineering educators, administrators, and representatives from industry, the humanities, and social sciences. The chief concerns are the problems of philosophy, content, arrangement, administration, and scheduling of general education in the engineering curriculum.

American Society for Engineering Education. Literature Significant to Education of the Technical Institute Type. Danville, Illinois: Technical Institute Division, 1953. 57 pp.

An annotated bibliography of 267 articles, 39 books, and 64 graduate studies covering technical institute education. Even though somewhat out of date, this bibliography will be of use to those doing research on technical education.

American Society for Engineering Education. Report on Evaluation of Engineering Education. Urbana, Illinois: American Society for Engineering Education, 1955. 36 pp.

Report of a committee (forty-six members) on engineering education in the United States. Chiefly concerned with curricular developments and the evaluation of them, the selection and development of an engineering faculty, the place of the humanities in engineering programs, and graduate study in engineering.

American Society for Engineering Education. Salaries and Income of Engineering Teachers. New York: Engineering Manpower Commission, 1960. 32 pp.

A national study conducted by the Engineering Manpower Commission with a detailed analysis of the salaries and income of engineering teachers.

Armsby, Henry J. The Three-Two Plan of Engineering Education. OE-56005. Washington, D.C.: Government Printing Office, 1961.

A description of a plan for engineering education which calls for three years of liberal education and two years of professional training in an engineering school. Those institutions participating in the plan are listed in this directory with a description of the program and its development.

Ashby, Eric. Technology and the Academics. London: Macmillan Co., 1959. 118 pp.

Concerns one incident in the ecology of universities, namely, the impact of the scientific revolution on universities in Britain. Presents a description of the conditions of British universities before scientific thought made any appreciable impact upon them, and the changes wrought in them due to the impact of scientific thought in the nineteenth century. The book closes with a discussion of some of the unresolved problems of adaptation facing British universities today, problems which are due in part to adaptations already made by universities to scientific thought in the nineteenth century and in part to the fresh impact of technological thought on universities in the twentieth century.

Barish, Norman N. Engineering Enrollment in the U.S. New York: New York University Press, 1957. 266 pp.

A graphic presentation and interpretation of enrollment trends in engineering education in the United States. Concerned with: (1) rate of growth in engineering enrollment and graduations, (2) kinds of engineers trained, (3) attrition of engineering students, (4) outlook for future engineering enrollment, and (5) proliferation and popularity of various engineering curricula. Conclusion: Shortage of engineering talent is critical with respect to engineers with high degree of mathematical and scientific orientation and those with unusual analytic and design creativity.

Brown, Gordon S. "New Horizons in Engineering Education," Daedalus, 91, 2:341-61, Spring, 1962.

Answers the question, "Who is an engineer?" Emphasizes the need for creative competence and for a major reappraisal of the engineering curriculum and facilities. Suggests the need for more interdisciplinary interaction, for the rebuilding of graduate courses around research (by faculty who do research themselves), and for the integration of general or liberal education with engineering. Discusses new areas and trends in engineering education.

Brown, Gordon S. "Modern Education in Science and Engineering: Pace Setter of Industrial Technology." Paper presented at the 1964 Longrange Planning Conference (Trends to '75), October 21-23, Palo Alto, California, Stanford Research Institute.

The author presents his concept of "doing engineering" by describing four broad categories of work function: (1) engineering which requires a talent for abstract thinking; (2) engineering which requires the arrangement, invention, or innovation of knowledge; (3) engineering which requires an ability to assemble, operate, and maintain complicated machines and works; and (4) engineering which requires a technological background and the ability to interpret engineering to related disciplines. The implications for engineering curriculum, for the allocation of scarce faculty resources, and for research activities are considered.

Burdell, E. S. General Education in Engineering: A Report of the Humanistic-Social Project. Urbana, Illinois: Committee of the American Society for Engineering Education, 1956. 122 pp.

Report of series of institutional self-evaluation projects financed by Carnegie Corporation. The committee is concerned mainly with which idea works well and which does not. Focuses on the problem of how to develop and maintain an effective program of humanistic and social sciences in the limited time available in undergraduate engineering education.

Calhoun, Daniel H. The American Civil Engineer: Origins and Conflict. Cambridge, Mass.: Harvard University Press, 1960. 295 pp.

Indicates in the preface that canal-building and transportation bursts of the American economy in the 1800's were influential in the emergence of engineering. Early chapters provide excellent historical material which could be used for comparison. Describes the apprenticeship system, also prevalent in law and medicine, used to train new engineers. Traces the development of gradations of rank and authority which began to appear as construction-supervision tasks multiplied--field versus executive engineers. By 1840, civil engineers were a definite occupational group.

Conference on Education of Gifted Students in Engineering. Evaluation of Special Programs for Gifted Students in Engineering. Boulder, Colorado: University of Colorado, 1963. 12 pp.

A short paper that briefly discusses: (1) the identification and selection of students, (2) content and coverage of special programs, (3) experiences and adequate spacing of experiences, (4) evaluation of the student, and (5) evaluation of the program. Specific evaluation objectives are posed as questions to show the criteria for properly evaluating a program.

Conference of Engineering Societies of Western Europe and the United States of America (EUSEC). Report on Education and Training of Professional Engineers. New York: American Society of Civil

Engineers, 1962. 76 pp.

A study of engineering education and training in the EUSEC and Organization for European Economic Cooperation (OEEC) countries. Sponsored by the Ford Foundation and presented in three volumes. Volume I is an introduction and description of the systems used in these countries; Volume II is a comparative study of engineering education; Volume III is a glossary of terms used in engineering education and training.

Conference on Science and Technology for Deans of Engineering. *Recent Advances in the Engineering Sciences*. New York: McGraw-Hill Book Co., Inc., 1958. 257 pp.

Cites demands being made for the strengthening of curricular offerings in engineering education. This book attempts to answer two questions: what are the legitimate demands and how may they be met?

Crites, J.O. and D.E. Super. *Appraising Vocational Fitness*. New York: Harper and Row, 1962. 688 pp.

A book bringing together the results of significant research on the most widely used personnel tests and inventories, as applicable to all types of vocational education and training.

Cross, Hardy. *Engineers and Ivory Towers*. Edited and arranged by Robert C. Goodpasture. New York: McGraw-Hill Book Co., Inc.,1952. 141 pp.

Presents the philosophy of one of the outstanding men in the engineering world in America. Cross presents a difinition of engineering and discusses the difference between education, training, and schooling. He also discusses the need for a broad general education for the engineer.

Eller, F. W. *A Guide to Engineering Education*. New York: Columbia University Teachers College, 1958. 45 pp.

A monograph designed for use by counselors and teachers in supplying guidance information to students interested in technological careers.

Engineers' Council for Professional Development. *Engineering Education and Training*. United States Contribution to EUSEC Conference on Engineering Education and Training. New York: The American Society of Mechanical Engineering, 1957. 64 pp.

Presents Conference subjects of general education before admission, selection for admission to engineering schools at university level, education at engineering schools at university level, practical training before, during, and after engineering studies, criteria for professional status, and post-first-degree education.

Engineers' Council for Professional Development. "The Education and Training of Professional Engineers in the United States of America," EUSEC Conference on Engineering Education. London: The Institution of Civil Engineers, 1953, pp. 83-102.

Conference held in London concerned with study of comparative education of engineers in Western Europe and the United States. Paper submitted by Engineers' Council for Professional Development. Concise, informative report on engineering education in the United States. Institutional diversity, degrees, curriculum, historical development, and recommendations.

Engineers Joint Council. Engineering Manpower Commission. Engineering and Scientific Education: Foundation of National Strength. Proceedings of Conference on Engineering and Scientific Education. New York: Engineers Joint Council, 1957. 99 pp.

Reports objectives of the conference: (1) to provide an up-to-date picture of the scientific and engineering manpower situation and its implications for education resources, (2) to highlight the unique problems of higher education in science and engineering and explore remedial measures, and (3) to contribute to general understanding of problems of higher education in technology.

Engineers Joint Council. Engineering Manpower Commission. Engineering Faculties: Supply-Demand and Salary Structure of Engineering Education Staffs. New York: Engineers Joint Council, 1956. 11 pp.

Presents a brief summary of the results of a survey conducted by Engineers Joint Council in 1955-56. Such topics as supply-demand, salary structure, and the mutual needs and dependency of college engineering programs and industry are discussed.

Engineers Joint Council. Engineering Manpower Commission. Engineering Student Attrition. Is It Undermining Our Nation's Manpower? New York: Engineering Manpower Commission, 1963. 13 pp.

A compilation of views of deans of engineering colleges with respect to the attrition rate of engineering students. In summary: (1) Large numbers of well-qualified students are dropping out of the engineering program. (2) High attrition rate causes student disillusionment and is one of the principal causes of declining freshman enrollment. (3) There are effective ways of reducing student attrition rates.

Estrin, H. A. (ed.). Higher Education in Engineering and Science. New York: McGraw-Hill Book Co.,Inc., 1963. 548 pp.

An anthology of more than 100 articles written by the leading educators, engineers, and scientists in the United States. It deals with nearly every phase of engineering and science teaching and professional growth of the engineering or science educator.

Feirer, J. L. Research in Industrial Arts Education. Kalamazoo, Mich.: Western Michigan College Print Shop, 1946. 73 pp.

A thesis presented to University of Oklahoma for the degree of Doctor of Education. This thesis attempts to present a composite identification of the major problems and investigates the known information on the status of research in industrial arts education programs leading to advanced degrees.

Finch, James Kip. Trends in Engineering Education: The Columbia Experience. New York: Columbia University Press, 1948. 140 pp.

An attempt to outline the main factors and forces which the faculty of the School of Engineering of Columbia University believes have influenced and now influence the evolution of American engineering education, to review and analyze these influences, and to report in general terms the plans and programs which this school has devised to meet these needs.

Foncannon, Howard F. Trends in Employment and Training of Scientists and Engineers. Prepared for the National Committee for the Development of Scientists and Engineers. Washington, D.C.: National Science Foundation, 1956. 23 pp.

Argues that the problem of supply-demand is by no means solely one of increasing the number of scientists and engineers. Qualitative considerations are likely to be more important than quantitative ones in shaping our scientific and technological effort in the future. This summary offers some of the important facts about the past, present,and future of scientific and technical education.

Grinter, L. E. (chairman). Report of the Committee on Evaluation of Engineering Education. Urbana, Illinois: The American Society for Engineering Education, 1955, pp. 40-66.

A report dealing with the evaluation of engineering education and with the characteristics which differentiate engineering curriculum from that in science. In determining desirable levels of mathematics, basic science, and engineering science for the

curriculum, the committee was concerned with reasonable, obtainable objectives rather than with minimum standards for accreditation. The present report is offered as indicative of the direction in which engineering education should evolve.

Hicks, Tyler G. Professional Achievement for Engineers and Scientists. New York: McGraw-Hill Book Co.,Inc.,1963. 372 pp.

Advice on how to earn more money and greater success in engineering and science. Advises engineers and scientists to: (1) develop personal skills, (2) learn the art of management, human relations, and communication skills, and (3) broaden their professional horizons.

Hockema, F. A. A Study of Higher Education for Engineers. West Lafayette, Indiana: Purdue University. "Studies in Higher Education," 59, 1947. 155 pp.

A doctoral study to discover ways in which engineering colleges and universities could improve their services to their students and to those organizations which employ large numbers of graduates. The sample size was twenty colleges and universities, two trade schools, two technical high schools, and twenty industries. The following areas of higher education in engineering were covered: aims and purposes, curriculum, selection of students, counseling and guidance, teaching, placement, and employers.

John, Walton and H. P. Hammond. Graduate Work in Engineering in Universities and Colleges in the United States. Washington, D.C.: U.S. Department of the Interior, U.S. Government Printing Office, 1936. 113 pp.

A survey of graduate work in engineering with the objective the presentation of the development and present status of graduate work in engineering in this country. In order to maintain adequate standards for higher engineering degrees, a study of current practices in graduate work in engineering was considered to be highly desirable by many leading engineering educators.

Kreith, Frank and Jeremiah Allen (eds.). Honors Programs in Engineering. Report of the Conference on Honors Programs in College Engineering, University of Colorado, Boulder, Colorado, 1963. Boston: Allyn and Bacon, 1964. 175 pp.

Considers ways and means of designing, establishing, and effectively operating programs for superior students in engineering. It provides some guidelines for attracting outstanding students into engineering and for stimulating these students enough to motivate them to complete their education and to make significant contributions to the profession.

Leare, B. Richard, Jr. "Engineering," Ch. VI, Education for the Professions. The 61st Yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1962, pp. 120-39.

An account of the westward expansion in America and the rapid development of railroads, mining, steel, and electrical industries, which sped the development of engineering schools. "An important problem that is shared with other professions is that of how to prepare the student to continue his learning throughout his life."

Love, Albert and J. S. Childers (eds.). Listen to Leaders in Engineering. Atlanta: Tupper and Love, 1965. 338 pp.

Presents not only the expected classification of engineering but, further explores the newest areas in present day engineering. General topics include: a description of the role and functions of the engineer, a discussion of the scientific and professional aspects of engineering education, the place of research in engineering, professional responsibility, and the obligations engineering has in government, public affairs, and in an evolving world.

Mantell, Murray I., et al. Orientation in Engineering. Englewood Cliffs, New Jersey: Prentice-Hall, 1955. 85 pp.

A book designed to help the student clarify his concepts of the engineering college and the engineering profession. Chapters deal with: (1) development of engineering, (2) engineering specialization, and (3) the future of engineering education.

Massachusetts Institute of Technology. Committee on Educational Survey. Cambridge, Mass.: Technology Press, December, 1949. 148 pp.

This report is the result of a two-year self-examination at MIT. The committee examined the concept of professional education upon which the Institute was founded and reassessed their way of teaching.

Miles, Leland and Ester Parker. "The Philosopher-Engineer: A Program of Discovery," Journal of Engineering Education, 52:455-57, March, 1962.

A report of an experimental reading program in the humanities involving extensive debate and discussion of books. Enthusiastic reception by engineers at the University of Cincinnati.

Morris, Frederick Clinton. Effective Teaching. New York: McGraw-Hill Book Co., Inc., 1950. 86 pp.

A manual for engineering instructors prepared under the sponsorship of the Committee on Teaching, American Society for Engineering Education.

Murland, James R. W. To Be an Engineer. London: Methuen, 1947. 180 pp.

General discussion of the many ramifications of professional engineering. Emphasis on principles and training systems common to all branches of engineering, with recurrent stress on: (1) the fact that course and progress of engineering career must depend on the individual; (2) importance of broad general knowledge for understanding people and the world; (3) practical aspects of training, salaries, and prospects.

National Society of Professional Engineers. Professional Development. Philadelphia: The Society, 1955. 56 pp.

Verbatim account of discussion and papers presented at conference in Philadelphia in 1955. Subjects: (1) Development and Utilization of Engineers in Industry. (2) Responsibility of Industry to its Engineers. (3) Nation's Need for Engineer-Industry Cooperation. (4) Engineer's Responsibility to Industry. (5) Role of Engineering Education in Engineer-Industry Cooperation. Stresses need for greater cooperation between educational institutions and industry for professional, personal, and social development of engineers.

Remmers, H. H., K. S. Davenport, and A. A. Potter. The Best and Worst Teachers of Engineering. West Lafayette, Indiana: Purdue University, "Studies in Higher Education," 57, 1946. 20 pp.

Account of sample of professional engineers selected at random from the five major engineering societies asked to rate their best and worst teachers of engineering on the ten traits of the Purdue Rating Scale for Instructors. More than 500 engineers responded.

Schill, W. J. Career Patterns of Technical and Vocational Educators. Danville, Illinois: Interstate Printers and Publishers, Inc., 1963. 78 pp.

A study in California of the five largest occupational sources of technical teachers. Represents an effort to predict the educational attainment of craftsmen who become teachers.

Timoshenko, S. P. Engineering Education in Russia. New York: McGraw-Hill Book Co., Inc., 1959. 47 pp.

A brief history of the development of Russian engineering education and a description of its present state. Particularly authentic because the author was raised and educated in Russia. Timoshenko's books on strength of materials are engineering classics used throughout the United States.

Trow, Martin. "Some Implications of the Social Origins of Engineers," Scientific Manpower 1958, 59-13:67-74, National Science Foundation, 1959.

Reports that engineers come from a lower economic strata than do physical science and math majors, and more are from lower strata than undergraduates in most other fields with the exception of education. This paper considers the implications of social origin of engineers as it bears on their recruitment to the profession and as it affects their orientation to nontechnical studies. It raises the question of the bearing of social origins on the extent and degree of creativity. The major burden of this paper is the suggestion that sociology may shed some light on factors and forces other than aptitude and personality characteristics which shape patterns of recruitment to science and engineering careers. The author believes that this knowledge may allow engineering instructors to act more effectively in increasing the likelihood both of success and satisfaction for the men who enter those careers.

UNESCO. Education in a Technological Society. Paris: UNESCO, 1952. 73 pp.

Describes a consensus of opinion of engineering experts consisting of four main points: (1) Technical education at present is wholly inadequate for future needs. (2) General education is lacking in realistic contemporary knowledge necessary for life in a technological society. (3) Cultural content of technical education is inadequate. (4) Technical education (in all forms) is too narrow in a world of rapid technological change.

U. S. Congress Joint Committee on the Economic Report. Instrumentation and Automation. Washington, D. C.: Government Printing Office, 1957. 202 pp.

Verbatim account of meetings and proceedings in discussion of the four important needs in engineering education and proposed solutions. Cites need for: (1) education of current engineering force, (2) manpower development, (3) development of efficiency,

(4) broader base of communications regarding techniques and equipment, and (5) training in educational institutions.

Williams, Clement C. and Erich A. Farber. Building an Engineering Career. New York: McGraw-Hill Book Co., Inc., 1957. 299 pp.

A "how-to" book for engineering students, emphasizing personal factors in studying engineering. General, nontechnical overview of the character, historical development, basic vocabulary, and curriculum of engineering.

LAW

Alspaugh, Doris. A Bibliography of Materials on Legal Education. New York: New York University School of Law, 1965. 99 pp.

A comprehensive bibliography of materials covering all aspects of legal education.

Association of American Law Schools Special Committee on the Law School Administration. Anatomy of Modern Legal Education. St. Paul, Minn.: West Publishing Co., 1961. 517 pp.

A report concerning the total machinery of legal education in the university, including cost and revenue, recruitment, faculty appointments, salaries, and research. Discusses law school participation in public affairs through involvement of faculty in community projects. A few pages devoted to graduate education beyond first professional degree and including continuing legal education. Gives findings and recommendations.

Beaney, William M. "Teaching of Law Courses in the Liberal Arts College: A View from the College," Journal of Legal Education, 13:55-58, 1960.

Presents the thesis that there can be no true liberal arts program without adequate attention to the vital and enduring role of law in human affairs. The problem is the need for qualified, enthusiastic instructors. Some law teachers will be willing to work with undergraduates, but there is need to induce Ph.D. holders in other fields, especially the social sciences, to undertake sufficient training in law to equip themselves properly for teaching law in connection with the other social sciences. Proposal to provide fellowships or summer seminars employing research in law. The author states that research will stimulate interest in the law, broaden knowledge of the field, and thus help inculcate future students with a feeling of the significant value of the law.

Berman, Harold J. "Teaching Law Courses in the Liberal Arts College: A Challenge to the Law Schools," Journal of Legal Education, 13: 47-54, 1960.

Asserts there is a necessity for law faculties to educate the faculties of arts and science in law, and also to remain open to the knowledge that other disciplines can give them. Law should be reintegrated with the social sciences, since they are all part of the science of society. If it were possible for the student to have a liberal arts major in law as it relates to all phases of knowledge and institutions, he would be grounded in legal theory and elementary legal techniques, as well as enjoy the broad education of his peers who major in history, literature, or other academic fields.

Bingham, Joseph Walter. "Law Schools and the Future," Journal of Legal Education, 6:486-503, 1953.

Submits that lawyers and law schools need to combat public ignorance of government in much the same way as doctors and medical schools had to fight ignorance of basic health ideas. The modern law school should be a center of legal science where the knowledge concerning phases of all social life, domestic and international, in their relation to government and the reciprocal effects of government on all phases of social life are accumulated, coordinated, and transmitted.

Brown, E. L. Lawyers, Law Schools and The Public Service. New York: Russell Sage Foundation, 1948. 258 pp.

Concerned not with legal education in general but with how the law school may minister more effectively to the education of those law-trained persons who will subsequently find themselves on the policy-making levels of the executive branch of government or, who as lawyers outside the government, will nevertheless exert large influence over it.

Carlin, Jerome. Lawyers on Their Own: A Study of Individual Practitioners in Chicago. New Brunswick, New Jersey: Rutgers University Press, 1962. 234 pp.

A report based on individual interviews with one hundred practitioners in Chicago. Findings: (1) Individual practitioners are not the elite of law in Chicago or elsewhere; those prestigeful persons in the elite are members of large firms, usually where the composition is Ivy League or graduates of the best law schools. (2) Individual practitioners are significantly over-represented with persons whose training was in night school. (3) The metropolitan bar is highly stratified. This has to do with the emergence of the law firm as the principal form of organization for legal services to the business elite. Notes the growth of corporation law and a shift away from the courtroom to the conference room.

Carvers, D. F. Legal Education in the United States. Cambridge, Mass.: Harvard Law School, 1960. 32 pp.

Describes the present system of legal education, as well as the history of legal education in the United States. Special attention is given to the topics of law school curriculum in the

United States, law student activities, law faculties, tuitions, and scholarships.

Currie, Brainerd. "Law and the Future: Legal Education," Northwestern University Law Review, 51:258-72, 1957.

States that predictions for legal education fifty years hence are characterized by the words "perpetuation" and "personalization." Buildings, textbooks, the law itself are all factors that will maintain continuity between legal education today and that of the future. Although the Bar continues to press for more practical education in the schools, there is recognition that this facet of education ought to be provided and can best be provided by the profession. Investigation of the potentialities of mechanization in legal education will not result in fundamental changes. Legal education will not change much externally in the next fifty years, but there is hope that legal educators will be better able to furnish the personal confrontation with the law that the law students need.

Ford Foundation Office of Reports. Architects of Order. New York: Ford Foundation, 1959. 60 pp.

Describes how lawyers are confronted with new responsibility in international relations and transactions. Ford Foundation grants to fourteen U. S. law schools emphasize development of international legal studies as an integral element in legal education. Law schools have obligation for advancement of legal science. Problems of including international law in curriculum are: (1) Few modern theories and concepts of jurisprudence have yet matured. (2) Research has scarcely begun on the subject. (3) Competent teachers are scarce. (4) The case method is the exclusive method of study. The latter is being modified into problem system. Despite problems, growth of interest in international legal studies has been phenomenal.

Fuller, Leon. "What the Law Schools Can Contribute to the Making of Lawyers," Education for Professional Responsibility. Report of Proceedings of Inter-Professions Conference on Education for Professional Responsibility. Pittsburgh, Penn.: Carnegie Press, 1948. 205 pp.

Restates and evaluates the objectives of legal education; discusses curriculum problems and future needs, the relationship of legal education to other academic disciplines, and to the client, and the public.

Griswold, Erwin N. "Educating Lawyers for a Changing World," American Bar Association Journal, 37:805-808, November, 1951.

Advocates that: (1) the case method be supplemented by a more appropriate method in the newer statutory fields of legal education; (2) research techniques be developed; (3) law schools become centers of team research; (4) international relations, as a very important area for research, be emphasized.

Hervey, John G. "Time for a Change -- The J. D. versus the LL.B. as the First Professional Degree in Law," Oklahoma Bar Association Journal, 35:533-37, March 28, 1964.

Discusses the need for a reevaluative study of the present degrees granted in legal education, in order to clarify ambiguity and misconceptions. Hervey presents arguments pro and con for keeping the traditional degrees and titles and also proposes changes for program flexibility and expansion which would be correspondingly expressed in the degrees and titles.

Horowitz, Harold W. "Graduate Study for the Practicing Lawyer," Journal of Legal Education, 4:196-210, 1951.

A report on the development and expansion of graduate and advanced professional programs for practicing lawyers, designed to compensate for deficiencies in overall coverage in a three-year law school curriculum and to meet needs for specialization. Describes the evening program at the University of Southern California School of Law to serve Los Angeles metropolitan area. Pages 199-210 present tables of data showing comparison of numbers registered in major law schools of U.S. during the period 1948-1951, covering first, second, third, fourth, and graduate years.

Katz, W. "Human Nature and Training for Law Practice," Report of Proceedings on Inter-Professions Conference on Education for Professional Responsibility, Education for Professional Responsibility. Pittsburgh, Penn.: Carnegie Press, 1948. 205 pp.

Emphasizes the need to promote training for policy decisions and judgment in legal education and suggests methods for accomplishing this: (1) by developing programs of research with law school funds, (2) by combating dogmatic, subjective attitudes which cripple policy judgment, and (3) by exploring the valuable body of material in psychological literature on the nature of man, on maturity, and on concepts of freedom.

Lortie, Dan C. "Laymen to Lawmen: Law School, Careers and Professional Socialization," Harvard Educational Review, 4, 29:352-69, Fall, 1959.

Reports findings of studies which show the relationships of types of law schools to success in professional law and in personal social relationships. The author submits that according to the analyses of these data, present legal education reflects an articulation with social organization structurally and functionally. Hence, legal education will not be changed without changes in this interrelationship taking place also.

McDougal, M. S. "The Law School of the Future: From Legal Realism to Political Science in the World Community," Yale Law Journal, 56:1345-1355, 1947.

Stresses the need to recognize that the lawyer must be able to bring the citizen to fuller understanding of the many interdependencies of societies in the world community, in order that appropriate institutions may be formed. The law school is the center where contemporary thought is to be processed into programs for action to "maximize community values." Anticipates that the experience of the past and the best methods of contemporary science will create the law of the future in training the lawyers of the future.

McDowell, B. and A. W. Mewett. "What Are Teachers Made Of: A Critical Appraisal of Graduate Study in the United States," Journal of Legal Education, 8:79-88, 1955.

A rather vehement advocation of some changes necessary in graduate legal education. The authors reduce all graduate level education into three main heads: (1) immediate professional specialization, (2) teaching of law and study of jurisprudential law, and (3) legal research-specialist. Authors submit that the fault for dissatisfaction in legal education, both graduate and undergraduate, lies in the teaching profession. Graduate programs (S.J.D.) reflect the tacit assumption that a good research scholar is also a good teacher, and vice versa. Discusses value of specialized research in training teachers. Discusses at length proposals, objectives, and functions of the legal educator and recommendations for curricular overhauling.

"Modern Trends in Legal Education," Columbia Law Review, 64:710-34, April, 1964.

Warns that the future of legal education remains clouded. Five major approaches, complementary and competing, vie for a dominant position in legal education. The curriculum squeeze grows more acute; no viable long-term solutions are apparent. Traditional pressures for continuance of the status quo remain. It must be concluded that when changes do occur, they will have to overcome formidable forces of resistance; they will have to come slowly; and they must be well heralded and supported by general opinion.

Nicholson, L. S. The Law School of the United States. Baltimore, Maryland: Lord Baltimore Press, 1958. 245 pp.

Principally a statistical report. To some extent it covers qualitative appraisals of law school performances by presenting the most important observations and criticisms of the inspectors who visited and reported on the law schools. For the most part, however, the book sets forth quantitative law school statistics obtained through answers to the questionnaires, with some analysis and comparison.

Niles, Russell D. "A Graduate Program for Lawyers," Journal of Legal Education, 1:590-599, 1949.

Description of the graduate program in legal education at New York University School of Law. Discussion of the value of the curriculum, student selection, teaching skill development, integration of other disciplines, and economics of the program. Proposes that this program serve as pioneering model for other schools, to meet needs in continuing legal education throughout the United States.

Osmond, Donald C. "A School for Young Lawyers," Journal of Legal Education, 2:365-75, 1950.

Describes a new facet of continuing legal education at Harvard Law School, called the "Forum " in this article,with the author's hope to encourage similar projects. A self-supporting, autonomous organization of various committees designed to assist students in learning practical aspects of legal practice not taught in law school: aid in choosing a locality for future practice, making a judicious selection for specialization, employment, related avocations and activities, program of lectures, and conferences; and, in general, making life inside law school continuous with life outside of it.

Parsons, Talcott. "A Sociologist Looks at the Legal Profession," Essays in Sociological Theory. Glencoe, Illinois: The Free Press of Glencoe, 1958 (rev. ed.), pp. 370-85.

An application of the analysis of the medical profession to that of law. The result of these commonplace considerations is that the sociologist must regard the activities of the legal profession as one of the very important mechanisms by which a relative balance of stability is maintained in a dynamic and rather precariously balanced society. The author notes that the professions can be thought of as agencies of social control, restoring the deviants to social status.

Prunty, Bert S., Jr. "Prelegal Education," *Journal of Legal Education*, 6:340-63, 1953.

A summation of the points of agreement in the third conference of prelegal advisers, college administrators, and law school lawyers held in New York University Law Center. Concerns problem of effectiveness of prelegal counseling, aptitude testing, achievement testing, motivation, and determination of interest in admitting law school candidates.

Redlich, J. *The Common Law and Case Method in American University Law Schools.* Bulletin 8, Carnegie Foundation for the Advancement of Teaching. Boston, Mass.: Merrymount Press, 1914. 84 pp.

Passes judgment upon the nature and success of the case method in legal education, through firsthand observations and use of the literature. This method is found to be a practical and efficient method by which students learn to do independent thinking. However, before a student enters upon this method of study, he ought to have a certain foundation upon which to build.

Reed, A. Z. *Present-Day Law Schools in the United States and Canada*. Bulletin 21, Carnegie Foundation for the Advancement of Teaching. Boston, Mass.: Merrymount Press, 1928. 598 pp.

A bulletin dealing with the function and work of present law schools in the United States and the Dominion of Canada, in so far as that relation can be interpreted through the curricula, conditions of administration, methods of teaching, and the relations of these law schools to practitioners of law.

Reed, A. Z. *Training for the Public Profession of the Law*. Bulletin 15, Carnegie Foundation for the Advancement of Teaching. Boston, Mass.: Merrymount Press, 1921. 498 pp.

Represents not simply a criticism of the law school of the time, but undertakes to develop in a scholarly way the history and progress of American legal education. The report describes the differences in conception that have existed from one period to another in our history. It aims to make clear the relation of the bar and of the bar examination to legal education; and, finally, it develops the historical relationship between a trained and educated bar and the administration of justice.

Schoenfeld, Marcus. "J.D. or LL.B. as the Basic Law Degree," Oklahoma Bar Association Journal, 35:527-31, March 28, 1964.

Explores a topic that was seriously discussed first in 1900. The question was renewed in 1930 and then followed by another thirty years of quiet. In this current renewal of the discussion, Schoenfeld reasons that the J.D. should replace the LL.B. Since candidates for professional degrees already have one college degree, they should receive appropriate recognition of their education beyond graduation from college. Those who oppose the J.D. have confused the old and present day bachelor's degrees with research and professional degrees.

Shea, Francis M. "Legal Education -- For What? Changing Perspectives, 1935-62," Buffalo Law Review, 12:270-79, 1963.

Concludes that law school as a three-year introductory course to a decade of legal education must give competent broad theoretical background to form a foundation for the practice, instead of spending a great deal of time on courses simulating the practice to be encountered. The general aims between 1935 and 1962 have not changed much. Main changes in legal education for the future must respond to society's increased awareness of justice and the possibilities provided by the scientific revolution. Seeks heavy investment in institutes associated with law schools where talented authorities could be gathered to consider what legal education should be doing to prepare the lawyer of tomorrow. Legal education must be based on a solid undergraduate education where precision of speaking and writing have been mastered.

Smigel, Erwin. The Wall Street Lawyer, Professional Organizational Man? Glencoe, Illinois: The Free Press of Glencoe, 1964. 369 pp.

Reports on a research sample representing a special group because of their skills in discourse and interviewing. It became necessary to be cautious about losing control of the respondent by becoming the interviewee instead of the interviewer. An important technique for breaking down reluctance is to reveal knowledge about the topic at hand. Found that Wall Street firms emphasize lineage, ability, and personality in looking for new men.

Solomon, Ezekiel. "Post Graduate Study at Harvard Law School," Harvard Law School Bulletin, 14:5-6, December, 1962.

An article in which an Australian tells Australians about legal studies at Harvard with observations made during his three-year residence studying for J.D. Of particular interest is experimentation with extra-traditional emphases in new courses, i.e., Harvard's "International Legal Studies," dealing with legal problems of international business. Makes comparative comments on Australian and American systems of legal education. In both: (1) Interdisciplinary cooperation is needed, especially with law, social sciences, and economics, in both teaching and research. (2) New areas of academic-professional cooperation need to be cultivated. (3) Lecture system and classroom discussion on cases and problems need to be integrated.

Stone, Julius. Legal Education and Public Responsibility. Conference on the Education of Lawyers and their Public Responsibilities, the University of Colorado, 1956. Boulder: Association of American Law Schools, 1959. 430 pp.

Outlines five main areas of public responsibility: (1) the lawyer's standards of decency, etiquette, and group self-protection; (2) standards in the pursuit of the client's interest; (3) standards vis à vis the community, generally in advancing his own or his client's interests; (4) standards as a citizen, or affirmative interest in the public domain; and (5) standards for settling conflicts between the duties arising within each of these areas or between them and those of general moral or religious duty.

Vanderbilt, Arthur L. "The Future of Legal Education: We Must Face the Realities of Modern Life, "American Bar Association Journal, 43:207-10, 280-82, March, 1955.

States that case method should be supplanted by the problem method patterned after the methods of Harvard Business School, i.e., give premises or essential points of cases to classes to debate and discuss what the law should be according to premises stated. In this way, both law as a system and the art of legal reasoning can be taught. The skills of various courses ought to be taught in the related classes by the instructor and with the cooperation of an experienced practitioner.

Wardwell, Walter S. and Arthur L. Wood. "The Extra-Professional Role of the Lawyer," American Journal of Sociology, 61:304-7,1955.

Examines the case of lawyers on the thesis that little attention has been given to the way in which occupation affects one's non-work social obligations. They point out that the lawyer is expected to do certain things, not part of his technical work, e.g., be politically active just because he is a lawyer. Their hypothesis: that such extra-professional roles may be attached to all professions.

Warkov, S. Lawyers in the Making. Chicago: Aldine Publishing Co.,1965. 180 pp.

A study considering basic questions of recruitment and allocation of prospective law students to law schools. The data are of unprecedented scope and afford an opportunity for detailed analysis of the factors that influence the choice of a career field.

Warren, William C. "The Promise of the Post-Graduate Conference," Columbia Law Review, 60:1-3, January, 1960.

A reevaluation of programs of continuing legal education. Stresses need to emphasize theoretical rather than practical aspects of legal education to impart an understanding of fundamentals. Discusses failure of legal education to emphasize educational breadth rather than specialization; an education of ideas, philosophy, and theory of law, rather than techniques. Stresses the need for scholarly research and cultural courses in programs of breadth, in order to prepare lawyers for awareness of new evolving concepts and methods of analysis.

LIBRARY SCIENCE

American Library Association. Board of Education for Librarianship. "Undergraduate Courses in Library Science," American Library Association Bulletin, 41:70, March, 1947.

Reports advantages of introducing initial professional library training into undergraduate college programs: (1) It will provide the necessary preparation for library positions that do not require a four-year college program plus one year of library school curriculum. (2) It will provide for recruitment without discouragement over length of study required. (3) The total undergraduate education can be geared to prepare the student for professional librarianship. (4) It will provide a uniform base for a fifth year curriculum suitable for obtaining a master's degree.

American Library Association. Board of Education for Librarianship. "The Librarian," American Library Association Bulletin, 41:378-81, October 15, 1947.

Report on 1946-47 activities; a consideration of "core (undergraduate) curriculum," responsibility of profession for recruitment, accreditation program improvements. A listing of meetings and conferences. No really new information. Mention of Columbia University and University of Denver Library Schools working to implement a "core curriculum."

"Are Library Schools Education for Librarianship?" Journal of Education for Librarianship, 2:7, Summer, 1961.

Reports that the divorce of theory and practice has been one of the real bones of contention between library schools and consumers of library school products. Libraries say that library school students have not the right knowledge or skills. An important theme here is the gap between the library schools and the librarians in the field. There is the need for recruitment of leadership, for research, for library schools to sell programs to professors to attract better students, to update teaching, and to encourage research and publication among faculty members.

Association of American Library Schools. Curriculum Revision Committee. "Some Objectives in Library Education," Library Journal, 72:286-89, February 15, 1947.

A report designed to acquaint librarians with "changes in emphasis, additions, and subtractions in course content, as well

As overall experimentation in library school instruction." The trend is moving toward increased realization of the importance of sociological background to the librarian. Library schools are stressing the role of the community and its individual citizens to prepare students for the changing needs of librarianship, to teach the student to be able to acquaint himself with the type of community he serves and to adapt the principles of librarianship to the particular community in which the library functions. To these ends the focus of instruction has shifted from a class orientation toward the individual. More emphasis is placed on imagination, discussion, practical situations, the subject specialties of the individual class members, and the use of projects and displays.

Beals, Ralph A. "Education for Librarianship," Library Quarterly, 17:296-305, October, 1947.

Asserts that the curriculum for librarianship should reflect the ends of librarianship, the characteristics of the professions, the characteristics that distinguish librarianship among the professions, and the place of professional schools in the universities. Examinations of competence should be required for admission and for completion of work for the degree. The preparation would include the following: (1) building of competence in a traditional subject field, (2) (concurrent with 1) studying the theory of communication with respect to the purposes and methods of librarianship and the nature and administration of social institutions, (3) learning the formation and use of book collections, (4) participating in seminars and writing theses, and (5) experiencing directed practice in libraries.

Berelson, Bernard (ed.). Education for Librarianship. Chicago, Ill.: American Library Association, 1949. 307 pp. (Papers presented at the Library Association, University of Chicago, August 16-21, 1948.)

Explains that since the years 1946-50 would probably be considered years of revision in the system of American library education, the conference organizers decided upon a review of objectives, methods, and problems of education for librarianship during this period. Reports covered: "The relationship of the professional school to the university, relationship of library education to other professional education, the historical development of library education in this country, preparatory education for librarians, professional education for various fields of librarianship, advanced study and research."

Carnovsky, Leon. "Preparation for the Librarian's Profession," Library Quarterly, 12:404-11, July, 1942.

Professional education for librarians has emphasized the technical aspects of librarianship, such as book selection and arrangement and assistance of patrons who need to use the books. The librarian's education should provide for future positions, not just the first job. A chief librarian of a medium-sized city library or head of a college library needs the technical education as listed above, but also needs: (1) training for contribution to community leadership, (2) broad general education, including several subject specialities, (3) training and practice in administrative techniques and organization, with specialization geared to type of library and collection, and (4) personnel training.

Churchwell, Charles D. "Education for Librarianship, 1919-1939." Urbana, Ill.: University of Illinois, 1966.

A doctoral dissertation in progress at the University of Illinois Graduate Library School, Urbana. Mr. Churchwell is concentrating on the period in which library schools proliferated and became affiliated with institutions of higher learning.

Clark, Joan. Your Future as a Librarian. New York: Richard Rosen Press, 1963. 160 pp.

One of a series of career books for late high school or early college students. It contains good material or cautionary tales of how to succeed (or not to succeed) in school, what to expect, where to apply, and what the image of the profession is.

Colwell, Ernest Cadman. "The Role of the Professional School in the University," Library Journal, 73:1340-1344, October 1, 1948.

Assumes that since a university faculty concerns itself with research, faculties of professional schools in universities must engage in the advancement of knowledge in their respective professions, educate their students to do research, and accomplish self-criticism by consideration of standards and performance. These are necessary concerns for professions having as their end service to society. Loyalty to standards must govern a profession's efforts to raise its level. Salary and quantity of education are artificial indications of professional level. Professional schools in their concern for contemporary problems reciprocally aid the research orientation of the university by keeping it in tune with reality.

Danton, J. Periam. Education for Librarianship. New York: Columbia University Press, 1946. 35 pp.

Brief pamphlet containing concise, descriptive analysis, criticisms, dilemmas, and proposals for education for librarianship.

Danton, J. Periam. "This Curriculum Business," Library Journal, 73:1126, 1174-75, September 1, 1948.

A criticism of Lancour's article, "The New Library Training Pattern Looks Good." Lancour implies that library schools agree on the course to be followed, but he fails to treat the arguments against the plan. Article ignores several factors: (1) There is increased demand for wide liberal arts background for librarianship and other professions, and professional librarianship has newly acquired "graduate status." (2) In reducing the quality and quantity of liberal arts and general education, the result will be the progression of poorly educated librarians, lower standards of performance in libraries, and less prestige for librarianship. (3) Further graduate study for the holders of new master's degrees will be delayed by need for additional liberal arts training. (4) Recruitment will not really be advanced, since the candidates attracted will be those who seek to avoid a full liberal education or else be required to take "core" classes during a summer without degree credit in order to enter the master's program with full liberal arts background. (5) There will be a decrease in the number of librarians pursuing graduate study beyond one year. (6) Pressure of shortages doesn't justify this curriculum revision, nor does the the curriculum attend to the question of the nature of the education needed to prepare various kinds of librarians.

Danton, J. Periam. Education for Librarianship. UNESCO Publications 388, Paris: UNESCO, 1949. 97 pp.

One of a series of four manuals published in 1949 dealing with fundamental questions of library work, librarianship training, role of library in adult education, and public library activity to meet needs of scattered, rural populations and special groups in the community. It was written principally for librarians by librarians writing freely as individuals expressing opinions on the principles of international public librarianship. Appendix includes samples of applications for admission to American library schools. Bibliography is universal in scope, with all entries after 1925. Although the non-English entries are not recent or very comprehensive because of the scarcity of items, the bibliography includes most recent important publications on each major aspect of librarianship education.

Forum of Library Education. "Library Education--What Is Missing?" Journal of Education for Librarianship, 5:87-92, Fall, 1964.

An article in which Charles Robinson, County Librarian, Baltimore, charges that library schools select low quality students who are poorly prepared and psychological misfits. Ray O. Hummel, Assistant Librarian of Virginia State Library in Richmond, suggests that the first year ought to be spent studying fundamental subjects.

Gitler, Robert Lawrence. "An Open Letter: A Reply Regarding Education for Librarianship," American Library Association Bulletin, 41: 179-81, June, 1947.

Counters a March, 1947, article, "Undergraduate Courses in Library Science," which presented four advantages of the "core curriculum" undergraduate program for library schools: (1) Gitler did not favor widespread adoption of professional training on the undergraduate level. (2) He favored taking steps to make the fifth year adequate preparation for the master's degree, without disturbing the academic character of the undergraduate program.

Goode, William J. "The Librarian: From Occupation to Profession?" Library Quarterly, 31:306-20, October, 1964.

States that attachment to learning service orientation, an increased use of professional schools for training membership in professional organizations, independence of the field from any other group, and individuality of occupation are the marks of professional librarians. Librarians still are faced with barriers from total professional status because their "knowledge-base" is not definite; the division between profession and non-profession is cloudy; much of the professional work done is not seen by the public; the librarian does not have control over the patron's qualifications and must work mindful of the patron's limitations; the gulf between values and practice is wide; and the librarian is vulnerable in all relationships as a result of a lack of a clear sense of professional identity.

Howe, Harriet E. "The Nature of Librarianship," Library Journal, 72: 192-97, February 1, 1947.

An article on recruitment of librarians as it is related to the development of a philosophy of librarianship. It was written as an offshoot of these points in Progress and Problems in Librarianship by Wheeler. The main premise is that the future of librarianship depends on library schools and librarians in the field. The profession as a whole must frame the statement of philosophy that will inspire students, engage in recruitment, formulate curriculum changes, prepare effective library school faculty, and develop programs for institutes, inservice training, and internship.

Illinois University Library School. Fifty Years of Education for Librarianship. Illinois Contributions to Librarianship, No. 1, Urbana, Ill.: University of Illinois Press, 1943. 114 pp.

Papers read in connection with the 50th anniversary of the University of Illinois Library School. It is a history of professional education for librarianship as represented by the University of Illinois Library School principally. About half of the book is devoted to the history of the Illinois Library School and the remainder to various phases of librarianship education. Topics in the second section include recruiting, library schools as they have developed to the present (1943), suggestions for future progress, and considerations of international librarianship.

Lancour, Harold. "The New Training Pattern Looks Good," Library Journal, 73:685-87, 700, May 1, 1948.

States that a new pattern is emerging--increased agreement that: (1) the first professional degree should be the master's, not the bachelor's, with the bachelor of library science representing the completion of a basic core of undergraduate courses in Library science; and (2) more opportunity for study for the doctoral degree be provided. Doctoral degree should be necessary for library school faculties and administrators of college and research libraries.

Leigh, Robert E. (ed.). Major Problems in the Education of Librarians. New York: Columbia University Press, 1954. 116 pp.

Presentation of a general program for education of librarians in the United States. The article analyzes the major problems in librarianship education with suggested solutions: (1) balance in basic professional year between theory and practice, (2) specialists for special libraries, small libraries, children's libraries, and (3) accreditation and certification.

Library Journal Editorial Forum. "Which Pattern?" Library Journal, 72:210, February 1, 1947.

Another statement of the undergraduate "core curriculum." It questions the relationship of the new curriculum plan to the three existing types of library schools and whether the plan actually will provide for library training more adequately and economically than previously. The Steig article, "Library Schools Reshaping Courses," develops the ideas of this one-page article.

Metcalf, Keyes D., John Dale Russell and Andrew D. Osborn. The Program of Instruction in Library Schools. Urbana, Ill.: University of Illinois Press, 1943. 140 pp.

A report of a study financed by Carnegie Corporation for the University of Illinois Library. It analyzes American standards and ideals of education for librarianship and gives theoretical conclusions as applied to Illinois Library School. It shows the

results of questionnaire survey of faculty and students and critically appraises library school methods: library training situation in the United States, historical trends, and present practices (1943). The subjects covered in the survey are: library school curriculum, instructional methods and procedures, suggestions for improvements in techniques, a second-year program of library schools, administrative aspects relating to executive and legislative functions, and faculty problems of student personnel.

Munthe, Wilhelm. American Librarianship from a European Angle. Chicago, Ill.: American Library Association, 1939. 191 pp.

An evaluation of policies and activities of American library education by Munthe, the director of the University Library, Oslo, Norway. Report was commissioned by Dr. F. P. Keppel, president of the Carnegie Corporation in 1936.

Reece, Ernest James. The Curriculum in Library Schools. New York: Columbia University Press, 1936. 220 pp.

An article analyzing the historical development of library work, library schools, and the curriculum for librarianship. Brief treatment of teaching and administration of librarianship is also included. It gives references to librarianship curriculum.

Reece, Ernest James. The Task and Training of Librarians. New York: King's Crown Press, 1949. 91 pp.

A report of field investigations carried out from February to May, 1947, to assist with curricular problems pending before the dean and faculty at the School of Library Service, Columbia University. It considers broadly an inquiry and reexamination of preparation for professional work in American libraries. The data were compiled by means of interviews with 200 employers and library supervisors. Interviews conducted individually and in group conferences. The appendix includes interview questions and name, position, and institutional affiliation of each respondent.

Russell, John Dale. "Professional Education for Librarianship," Library Quarterly, 12:775-93, October, 1942.

States that at the time of his study (1942), four-year college education did not provide the required broad educational background. Library schools provide the basic library curriculum, but no standard amount of time is spent on each field. The specialization along the lines suggested is available, with limitations, as additional courses in library school. The program should be based on a broader academic curriculum. Librarianship interns of fifth-year professional education should not be limited to technical methods.

Savage, Ernest A. "The Training of Librarians," Special Librarians in General Libraries. London: Grafton, 1939, pp. 158-212.

Based on the English system of education for librarianship. However, this paper has considerable relevance to American library school curriculum. Many of the suggestions, now more than twenty-five years old, have been incorporated into library school curriculum to some degree. The principal points for professional education are treated in the sections, "Teaching of Library Administration," "Teaching of Bibliography," and "Training for Special Librarianship." Savage emphasizes the need for laboratory practice simulating actual situation in cataloguing and classification, use of bibliographies for book selection and reference, and problems of administration.

Snow, Ralph R. "The Library's Role in Society Today?" Journal of Education for Librarianship, 2:178-182, Spring, 1962.

Assumes that the low prestige level of the librarian is frequently given as an excuse for the low state of librarianship. Librarianship has grave responsibilities in reference to burgeoning technical information. The theme of this article is that the librarian is a cultural "guide."

Steig, Lewis P. "Library Schools Reshaping Courses," Library Journal, 72:1162-1165, September 1, 1947.

Explains that the trend in 1947 was toward a "core curriculum" in librarianship to be offered on the undergraduate level. Completion of this curriculum would merit position at top of subprofessional level or beginning professional or entrance into graduate library school for a fifth year of study leading to master's degree. If this is indicative of the direction of library school education, then greater standardization of library school curriculum is in order. To this end, we must: (1) define meaning and determine content of core curriculum; (2) decide what accreditation or controls of training should be used; (3) decide what the relation of training agencies is to recruitment; and (4) decide what functions accredited schools serve in training school or teacher librarians.

U. S. Office of Education. Library Services Branch. Survey of Library Education Programs, Fall 1964. Washington, D.C.: U.S. Printing Office, 1965. 56 pp.

Provides statistical information concerning library education, enrollments, degrees, faculty, and financial support in the United States. Data were compiled from questionnaires on programs designed to prepare student for professional library positions. The forms were distributed January 15, 1965; second mailing, February 15, 1965; third mailing, March 1, 1965. Survey universe was made up of universities, liberal arts colleges, and teachers' colleges. Bases of inclusion: enrollment of at least 200 students and a program of four or more years.

Vann, Sarah K. Training for Librarianship before 1923. Chicago, Ill.: American Library Association, 1961. 242 pp.

Detailed analysis of developments of ideas and concepts of librarianship training in the United States during the "Dewey to Williamson period," 1887-1923. It shows a historical perspective of events and patterns of library education: (1) college education base for professional, (2) second-year specialization in professional education, (3) practical experience in final year of training, (4) library schools offering professional training only, (5) professional standardization and certification, and (6) affiliation of library schools with universities rather than public libraries.

Wheeler, Joseph Lewis. Progress and Problems in Education for Librarianship. New York: Carnegie Corporation, 1946. 107 pp.

One man's study of the status of training for librarianship, with special reference to library schools, faculty, students, together with their relations to higher education and the profession of librarian. This was commissioned by the Carnegie Corporation. It includes a 98-entry bibliography containing works from 1923 through 1946, with concentration on works of the 40's. Also includes announcements, syllabi, and reports from various library schools, together with many American Library Association mimeos of appreciable pertinence.

White, Carl Milton. The Origins of the American Library School. New York: Scarecrow Press, 1961. 211 pp.

A well-documented study by a former professor of library sciences focusing on the early years of librarianship training, particularly the "half century or so when the American library school originated and when the ideas it stood for flowered and first triumphed." (p. 13) Thus, it, like the Vann study, is not concerned with the post-Williamson period. Although White's study convincingly shows that the origin of the American library school lies in the commonly accepted apprenticeship system of the 19th century, the study does not attempt to account for the forces of professionalism which sought to free library education from apprenticeship methods and to place it in the context of the academic professions.

Wright, Edward A. "Standards and Stature in Librarianship," Journal of Education for Librarianship, 2:59-67, Fall, 1961.

Among many other points, notes that many graduates of accredited schools assume positions which require little skill, thus resulting in loss of professional competence and ability. "Efforts to establish librarianship as an emerging profession may well suffer severe setback unless we are able to establish a clear-cut line between duties of fully professionally trained and certified personnel and the partially trained products of undergraduate departments." It raises issues of accreditation.

MEDICINE

Abrahamson, Stephen. "Professional Education," Review of Educational Research, 35:4, 335-44, 1965.

A review of four hundred research reports on education for medicine, dentistry, nursing, law, social work, and engineering. Special attention is given to students, curriculum development, techniques, and material of instruction and faculty.

Allen, Raymond B. Medical Education and the Changing Order. New York: The Commonwealth Fund, 1946. 142 pp.

A discussion of the historical background and the contemporary social process of medical education as well as preparation for the study of medicine and formal medical education.

Ashford, Mahlon (ed.). Trends in Medical Education. Proceedings of the New York Institute on Medical Education, 1947. New York: The Commonwealth Fund, 1949. 320 pp.

Studies by the American Association of Medical Colleges on student selection, undergraduate education, the resident, the intern, graduate education, and postgraduate education. A discussion of the basic problems involved in each area, with constructive proposals and recommendations for changes in curriculum and reevaluation of the objectives of medical education.

Baehr, G. "Community Relations of University Teaching Hospitals: The Organization of Medical Practice," Journal of Medical Education, 36:795, 1961.

A bill of particulars against the disorders in medical practice: (1) the splintering into specialties, (2) the decline in number and professional status of family physicians, (3) increases in health insurance so all patients will soon be private patients, (4) absence of supervisions, controls, or standards in solo practice, and (5) rising costs. Emphasizes that only twelve per cent of medical care is given in the hospital and advocates the establishment of group practice in medical schools composed of twenty to twenty-five physicians on half-time, who would serve as demonstrators for teaching of good medical practice.

Becker, Howard S. "Student Culture in Medical School," Harvard Educational Review, 28:70-80, Winter, 1958.

Presents an argument for the need for awareness of student culture. The author believes that student culture is the cornerstone of many faculty difficulties with students, and, therefore, faculty must make some accomodation.

Becker, Howard S., B. Geer, E. Hughes, and A. Strauss. *Boys In White: Student Culture in Medical School*. Chicago: University of Chicago Press, 1961. 456 pp.

Data gathered by participant observation describing the characteristics of the culture of the medical school at the University of Kansas. The students' adaption to this culture and variation in student responses toward medical education and medicine are described.

Bloom, S. W. "The Sociology of Medical Education," *The Milbank Memorial Fund Quarterly*, 43:143-184.

A review of studies and articles interpreted in terms of the sociology of medical education. Attention is given to the position of the medical school environment in influencing the development of medical students.

Bloom, S. W. "The Process of Becoming a Physician," *Annals of American Academy of Political and Social Science*, 346:77-78.

A survey of studies which relate to attitudes involved in the socialization process for the physician's role.

Bugbee, G. "The Effects of Teaching and Research on the Teaching Hospital's Economy as Viewed by Hospital Administration," *Journal of Medical Education*, 36:799, 1961.

Stresses the fact that one cannot separate the costs of teaching and research from those of patient care. The author relates the size of the hospital to teaching costs. Bugbee feels that each of the participants (the hospital and the university) must assume as much of the cost as possible. The teaching hospital rates must be comparable to the non-teaching hospital's. Questions whether the difference should be made up by the university.

Burgess, Alex and John C. Leonard. "Community Hospital and Graduate Education Today," *Journal of the American Medical Association*, 167:2, May 10, 1958.

Recommends that medical authorities and universities take greater interest in using the community hospital as an ideal training setting for the general practitioner as well as for the specializing resident. A study of fifty-three such hospitals shows excellent and continuously improving programs of graduate education.

Caughey, John L., Jr. "The Medical Student: His Education and His Goals," *The Alumni Bulletin*, Western Reserve University School of Medicine, 30:1, 13, 1966.

Discussion of the problem of preparing a family doctor to give comprehensive health care. This author thinks that the value judgments imparted to tomorrow's doctors are determined more by professional interest of influential faculty members than by a serious analysis of the health needs of the community.

Coggeshall, Lowell T. *Planning for Medical Progress through Education.* Evanston, Illinois: Association of American Medical Colleges, April, 1965. 107 pp.

Suggests that the Association of American Medical Colleges needs to increase efforts in procuring leadership in health science educational programs. The author notes that the environment of the university during the last twenty years has become more significant to the professional schools.

Commission on Graduate Medical Education. *Graduate Medical Education*. Chicago, Illinois: University of Chicago Press, 1940. 304 pp.

A report dividing graduate medical education into three parts: the internship, which is part of the basic preparation for practice; the residency, which is graduate education proper since it prepares a physician for the practice of a specialty; and postgraduate courses to keep practitioners abreast of their present fields of practice.

Comroe, Julius H. "Objectives of Medical Education: The Effect of Research Emphasis on These," *Journal of Medical Education*, 37 (Part 2): 17-21, December, 1962.

Suggests that individual faculty members need to develop a conscious recognition of their teaching objectives. The faculty as a group should agree on broad objectives covering attitudes, concepts, skills, and knowledge that students should gain in the medical school program. Responsibility for each of these could be assigned to an individual or to some department. Comroe mentions several ways in which grant-supported staff could aid the school in achieving the goals of education.

Cope, Oliver and Jerrold Zacharias. *Medical Education Reconsidered*. Report of the Endicott House Summer Study on Medical Education, Philadelphia, Penn.: J. B. Lippincott, 1965. 89 pp.

Deals with need for revising curricula in medical schools and offers four curriculum plans to meet these needs.

Council on Medical Education. "Medical Education in the United States," Journal of American Medical Association, 190:7, 145, November, 1964.

The Council's yearly report to the profession on the existing conditions of medical education.

Cowles, John T. and Jenny L. Csanyi. Research Training of Medical Students. Pittsburgh, Pennsylvania: University of Pittsburgh, 1963. 280 pp.

A study based on data from a sample of thirteen medical schools. It answers many of the questions concerning: (1) the background and characteristics of students undertaking research along with their prescribed studies in medical school, (2) the varieties of research opportunities offered, (3) the accomplishments and values of such experiences as perceived by students and faculty.

Deitrick, John E. and Robert Berson. Medical Schools in the United States at Mid-Century. New York: McGraw-Hill Book Co.,Inc., 1953. 380 pp.

A major study in medical education. Very comprehensive and informative. The focal point of the survey is concerned with the effects of present educational and training programs on the student, if his training is the primary objective in all activities and policies of the medical school. Excellent appendix and summary chapters.

Evans, Lester J. The Crisis in Medical Education. Ann Arbor: University of Michigan Press, 1964. 101 pp.

States that medical schools and their teaching hospitals are not primarily established to serve the community. If this were the case, the schools could not participate or experiment with new forms of service. The profession of medicine, according to the author, is the only one that must be practiced in order to be taught. Therefore the university needs to be free to organize and practice in the fashion which it considers correct. Control from outside facilities does not coincide with the ideas of the university.

Flexner, Abraham. Medical Education. New York: Macmillan Co., 1925. 334 pp.

A classic study comparing medical education in certain European countries and America against the background afforded by

the general educational and social systems of the respective countries. It depicts and discusses general tendencies and principles.

Gee, Helen H. "Differential Characteristics of Student Bodies: Implications for the Study of Medical Education." Report of the Conference on Selection and Educational Differentiation. Berkeley, California: Center for the Study of Higher Education, 1960, pp. 125-54.

Ascribes to medical schools (as units) and medical school graduates (as groups with different sets of aspirations) discriminably different sets of characteristics. This discriminability hinges on more than differences in intellectual ability. Measures of non-intellectual as well as intellectual characteristics yield variances as large as those found in college population.

Gee, Helen H. and J. R. Cowles (eds.). "The Appraisal of Applicants to Medical School," *Journal of Medical Education*, 32, Part 2: (entire issue), October, 1957.

Results of an institute on the evaluation of applicants, criteria for selection, assessment of intellectual and non-intellectual characteristics, and the nature of the admission process.

Gee, Helen H. and R. J. Glaser (eds.). *The Ecology of the Medical Student*. Evanston, Illinois: American Medical Colleges Association, 1958. 262 pp.

The study of the complex process of becoming a physician. Emphasis on the great diversity in socioeconomic backgrounds, values, aptitude, and achievement levels of medical students.

Indicates that students in medical schools tend to be more alike at graduation than are graduates in other fields.

Discusses the psychological effects of medical training on students' attitudes toward self, patients, faculty members, and medicine as a vocational choice.

Gee, Helen H. and E. Shepley Nourse. *Admission Requirements of American Medical Colleges, 1959-60*. Evanston, Illinois: Association of American Medical Colleges, 1959. 237 pp.

A handbook designed to provide an official source of information on premedical students and admission to medical school.

Goddard, David R. "Medicine and the University," *Journal of the American Medical Association*, 194:133-38, November, 1965.

An article based on the theme of the reciprocal relationship of medical schools and universities and the mutual benefits derived from each. The stimulating association of medical faculty and researchers with those in the sciences on which medicine depends is important. The cultural advantages offered by the university to the medical personnel is of great value. The author questions the wisdom of planning a medical school in physical or intellectual isolation from a university environment.

Gratwick, Roger, J. Drasgow, and B. Stockin. "Predicting Medical School Success: A Ten Year Study," Journal of Experimental Education, 31, No. 2:203-5, Winter, 1962.

A report of a four-phase study in which: (1) The relationship of premed grades in the sciences with grades received during the freshmen year of medical school was examined (correlation .75); (2) A subjective evaluation was made of each candidate by the Pre-Medical Appraisal Committee; (3) The premedical and medical school records of 240 students were analyzed in three achievement groups: (a) above average grades, (b) average grades, (c) below average grades; (4) A sample of 101 entering freshmen aspiring to be physicians or dentists were followed for five years to study their goal achievements. (Only ten achieved admission to medical school and eleven to dentistry.)

Implications and conclusions are drawn which indicate the need for better measurements of ability and interest.

Hall, Oswald. "The Stages of a Medical Career," American Journal of Sociology, 53:327-37, March, 1948.

A study of the profession of medicine as practiced in "an Eastern American city." Considers a medical career as a set of more or less successful adjustments to the network of institutions, formal organizations, and informal relationships through which it is practiced. Four stages are discussed: (1) generation of an ambition, (2) gaining admission to the various medical institutions, (3) acquiring a clientele, retaining, and improving it, (4) developing informal relationships with colleges (to facilitate (2) and (3)) known as the "inner core." The importance of the "inner core" is as a means of organizing the specialized fields as well as controlling selection and appointment of new recruits into the profession. Verbatim information based on interviews with a wide variety of doctors.

Ham, T. H. "Research in Medical Education: Participation of Faculty and Students," Annals of New York Academy of Sciences, 128, 2:501-17, 1965.

A detailed account of the conceptual base, planned operation, program, and efforts at evaluation of the medical education program at Western Reserve.

Hammond, Kenneth R. and Fred Kern, Jr. Teaching Comprehensive Medical Care. Cambridge, Mass.: Harvard University Press, 1959. 642 pp.

Evaluates General Medical Clinic program and provides data relevant to medical education in general. Concludes: The overall effect of the General Medical Clinic program was a positive effect on the student's attitudes by reducing the development of increasingly negative attitudes toward comprehensive care. This result was achieved without impairing the General Medical Clinic student's acquisition of traditional medical knowledge and skill. The more intelligent, independent, and mature student was more responsive to the aims of the GMC. A detailed summary of the findings is included. Well designed, but the breakdown and presentation of topics makes it difficult to follow at times. Actually integrated three studies into one.

Hinsey, J. C. "The University's Role in Medical Care," Journal of Medical Education, 36:216,1961.

Declares: "We can all agree that the best quality of patient care is essential for teaching, whether to medical students, house staff, or nurses, and for medical research of a high order." In a like manner the author states that the best quality of medical care is provided where teaching and research are being conducted. Consequently, the need is for: (1) teaching personnel and programs, (2) research space and equipment, (3) library, and (4) clinical facilities and resources.

Hinsey, J. C. "The American University Structure: Organization of Medical Faculties, Departments, Committees." Paper given at Seventh Annual Conference on Medical Education for Foreign Scholars in the Medical Sciences, San Francisco, June 23-26, 1963, pp. 21-31.

Argues that schools of pharmacy and nursing deal with undergraduate students; medicine deals with graduate students. An attempt to standardize their educational policies is questionable and difficult.

Hinsey, J. C. "Full-time Clinical Faculty: An Interpretation of the Problem as it Concerns Medical School Administration," Journal of the American Medical Association, 162:16-19, September 1, 1956.

Interprets the problem involved with recruiting, maintaining, and compensating staffs of medical schools and teaching institutions.

Contributions made by part-time and volunteer faculty members are impressive and important, but their effectiveness is greatest in departments where there is full-time leadership. A proper balance between part-time and full-time staff is best.

Hinsey, J. C. Editorial in Medical Education Forum, Journal of Medical Education, 35:835, 1960.

The chief responsibilities of those who hold academic appointments in medicine are to: (1) add to the scientific knowledge, (2) integrate new discoveries into the existing body of knowledge, (3) pass this along to students, and (4) suggest the early application of new knowledge to the sick.

Horowitz, Milton J. "Research in Professional Education: The Example from Medical Education, Including Reference to Nursing and Dental Education." Unpublished early draft, prepared for New Dimensions in Higher Education Series, U.S. Office of Education, October, 1966. 69 pp.

A monograph identifying trends and developments in medical education in the areas of: curriculum development, innovation, and institutional self-study; contributions of the Association of American Medical Colleges; student characteristics; the teaching-learning process; followup studies, career studies, postgraduate and continuing education.

Annotated references are included.

Horowitz, Milton J. Educating Tomorrow's Doctors. New York: Appleton-Century-Crofts, 1964. 264 pp.

An investigation of the experiences of twenty medical students as they progressed through medical school. This study was done within the framework of the experimental program in medical education at Western Reserve. Assumptions of this program: (1) the student is the primary focus of educative process; (2) self-education is important; (3) a graduate school should have an atmosphere in which students could take initiative and responsibility for their own education. The latter part of the study is limited to individual case studies.

Hurd, Archer W. Factors Influencing Student Success in Medical Education. Bureau of Educational Research and Service, Richmond, Virginia: Medical College of Virginia, 1950. 64 pp.

Includes in this volume continuations of studies made earlier and published in Problems of College Success or Failure (1949). The intent is to follow one class, Freshmen 1948-49, through four years of medical school to get a better perspective of the factors and features of student success or failure in preparation for a medical career.

Joint Committee of the Association of American Medical Colleges and the American Association of Social Workers. Widening Horizons in Medical Education. New York: The Commonwealth Fund, 1948. 228 pp.

A study which aims to: (1) gather information on present teaching of the social and environmental aspects of medicine; (2) analyze the data obtained; (3) evaluate the methods and techniques of instruction in use; and (4) offer recommendations based on conclusions drawn from the study.

Klicka, K. S. "Hospital Community Planning, Teaching Hospitals, and Medical Schools," Journal of Medical Education, 37:273, 1962.

An article emphasizing the balance between physician pressure (and control) versus responsibility. Physician pressure is for more beds, as well as for better practice and care.

Kuiken, J. S. and Russell Eisenman. "The Negro in the Field of Medicine," Educational Forum, 4,30:475-81, May, 1966.

Well-documented article outlining progress in medical education for the Negro. Data indicate grounds for optimism in some areas, but not in all aspects. White physicians increased 25% during 1952-62, while Negro physicians increased 12.57%. However, since 1955, Negroes in white medical schools dropped from 216 to 164. The role of education must make provision for the unique educational problem the Negro brings, in addition to the problems of prejudice and discrimination.

Lee, Peter V. "Experimentation in Medical Education: the Student, the Patient, and the University," Annals of New York Academy of Sciences, 128, Art. 2:532-543.

A review of current experiments focusing on the need to rediscover the student as the reason for medical education and the patient as the reason for medicine, without whom the student cannot learn.

Lee, Peter V. Medical Schools and the Changing Times: Nine Case Reports on Experimentation in Medical Education, 1950-1960. Evanston, Illinois: Association of American Medical Colleges, 1962. 90 pp.

An analysis of nine educational programs that reflect the impact of the scientific and social complexities following World War II. The report analyzes: (1) the climate of change, (2) integration of university and medical education, (3) teaching comprehensive medicine, (4) reorganization of medical curriculum, and (5) founding a new medical school.

Lippard, Vernon W. "The Medical School: Janus of the University," Journal of Medical Education, 30:698-707, December, 1955.

Discusses the medical school as a double-faced institution required to respond to the community and the university. The university needs to take more responsibility for the medical school if this relationship is to be successful. The author feels that the humanities, social sciences, and behavioral sciences are as necessary to a doctor's education as are the natural sciences. Medicine is a graduate discipline and the program needs to be so conducted. Students should be treated as mature and responsible people. Medical faculty deserve the same salary benefits and status as regular university professors. Physical closeness of the medical school to the university will aid in removing obstacles between the medical school and the community.

Merton, R. K., et al. The Student Physician. Cambridge, Mass.: Harvard University Press, 1957. 360 pp.

A sociological approach to medical education in which the student's attitudes, experiences, changes are studied as he progresses through the program. Some historical background of medical training is presented as well as a section devoted to a comparison of medical and law students. The study concerns students in only two schools, but probably is representative of most medical schools in many respects. Interesting to the student concerned with collecting similar information is an appendix, which gives the kinds of questions asked in the study.

Mians, J. H. "The Clinical Training of Medical Students," Report of proceedings of Inter-Professions Conference on Education for Professional Responsibility, Education for Professional Responsibility. Pittsburgh, Pennsylvania: Carnegie Press, 1948, pp. 114-123.

Seminar used in teaching social and emotional factors in patient's problems.

Describes how in beginning of clinical training student sees patient as collection of diseased organs due to preclinical curriculum. Introduction of clerkship and case method considered a milestone because this gave the student responsibility in patient care, which leads to growth of professional conscience, development of insights, and understanding of what illness means to patient. Description of clerkship.

Miller, George E. "Medicine," Chapter V, Education for the Professions, 61st Yearbook of the National Society for the Study of Education, Chicago, Ill.: University of Chicago Press, 1962, pp. 103-19.

Reports that since World War II there has been increasing encouragement of student research. Western Reserve's Comprehensive Medical Education program is discussed. With the growth of independent boards, e.g., Advisory Board of Medical Specialties, there has been ensuing rigidification of the sanctioned alternatives through which aspirants can become doctors. The universities are equally at fault, for they emphasize competition in courses and accumulation of credit hours, which are equated with competence.

Miller, George E. (ed.). Teaching and Learning in Medical Schools. Cambridge, Mass.: Harvard University Press, 1961. 296 pp.

The first reference work on teaching and learning designed especially for medical educators. Emphasizing what the student gets from education, it describes in terms of basic theory the strengths and weaknesses of familiar and lesser known techniques. The purpose is to provoke reexamination of many educational practices that have become habits in medical schools.

Parsons, Talcott. "Social Structure and Dynamic Process: The Case of Modern Medical Practice," Chapter X, The Social System. Glencoe, Ill.: The Glencoe Free Press, 1951, pp. 428-73.

Asserts that medical practice "... In common with the predominant patterns of occupational roles generally in our society, (it) is, (therefore) in addition to its incorporation of achievement values, universalistic, functionally specific, and effectively neutral. Unlike the role of businessmen, however, it is collectivity oriented, not self-oriented." In concluding the discussion on balancing factors around the various pattern variables, Parsons notes that medical practice reveals "the balancing processes within the social system."

Peterson, O. L., L. P. Andrews, R. S. Spain, B. G. Greenberg. "An Analytical Study of North Carolina General Practice," Journal of Medical Education, 31:1-165 (entire issue), Part II, 1956.

An attempt to evaluate the performance of practicing physicians, to establish criteria for evaluating their adequacy, and to relate these criteria to other variables such as medical school performance.

Pollack, J. "Teaching and Research Costs in the Teaching Hospital's Economy: A Consumer View," Journal of Medical Education, 36:805, 1961

Cites the Columbia University study by R. Trussell of a select group of hospitals with perfect matching of interns. Cost in teaching hospital was $35 a day per bed, whereas the average for all hospitals was $24 a day. This is not explained by the size of the hospital or by the available facilities and services. Pollack questions whether the patients should pay more for this superior hospital care in the teaching hospital. On the other hand, he sees teaching and research as community problems and not those of the patient. He stresses the need for study and reappraisal of prepayment plans from the consumer's point of view.

Powers, L. and R. Trussell. "Medical Schools and Teaching Hospitals: Curriculum, Programming and Planning," Annals of the New York Academy of Sciences, 128, Art. 2: 245-70, 1965.

Proceedings of a New York Academy of Sciences conference on improving the scope and quality of medical education and medical facilities necessary to medical education and research.

Pratt, O. G. "The Role of the Physician in the Hospital." Paper presented at an instructional conference of the American Hospital Association Convention, 62nd Annual Meeting, San Francisco, California, August 29-September 1, 1960.

Presents three alternatives for the physician in the hospital: (1) Competitive private practice associated with a willingness to accede to self-imposed controls and discipline through tight medical staff organization dedicated to the principles of the Joint Commission on Accreditation of Hospitals and the medical audit and with due recognition of the moral and legal responsibilities of the trustees. (2) Completely full-time, salaried medical staff with closely integrated services and clear-cut channels of supervision and responsibility. (3) A combination of the above two types of organization with one or more mature and experienced full-time physicians assuming over-all responsibility for supervision.

Pratt, O. G. and L. A. Hill. "The Price of Medical Education," Journal of American Hospital Association, 34:44, 104, August 1, 1960.

A discussion of the costs of medical education. The authors use figures from a large teaching hospital to indicate the extent of these costs. They also discuss how medical education costs are to be met and they stress the importance of explaining these costs to the public.

Reader, G. G. "The Teaching Hospital's Dependence on the Community," Journal of Medical Education, 36:791, 1961.

Emphasizes the selectivity of patients for special training versus using a variety of patients for the comprehensive training of internists and other medical specialists. "A teaching hospital cannot get along with busy practicing physicians directing its destiny today." Distinguishes locally versus nationally oriented hospitals. The former is patient-oriented without research, and the latter has strong research and training programs, with less concern for patient care.

Romano, J. "The Physician as a Comprehensive Human Biologist," Education for Professional Responsibility. Report of Proceedings on Inter-Professions Conference on Education for Professional Responsibility. Pittsburgh, Penn.: Carnegie Press, 1948, pp. 156-69.

Cites need for education which will lead to understanding not only of disease process, but of total aggregate of biological experiences including psychological and social aspects, and need to relate this total experience to community of patients. Premedical education is more involved with physics, chemistry, biology than with psychology sociology, history, and literature. The author claims that the student doesn't have opportunity to learn the nature of man in its broadest meaning. Change is taking place; first year medical students are more aware of significance of personal and social factors in human experience.

Sanazaro, Paul J. "An Agenda for Research in Medical Education," Journal of American Medical Association, (in press, 1966).

A discussion of the kinds of research needed in medical education and the trends in current research emphases.

Sanazaro, Paul J. "Research in Medical Education: Exploratory Analysis of a Black Box," Annals of New York Academy of Sciences, 128, Art. 2:519.

A preliminary report which attempts to identify the relative contributions of major determinants of educational outcomes.

Severinghaus, Aura E., et al. Preparation for Medical Education: A Restudy. Report of the Committee on the Resurvey of Preprofessional Education in the Liberal Arts Colleges. New York: Blakiston Division, McGraw-Hill Book Co., Inc., 1953. 400 pp.

One of the four major studies conducted in medical education encompassing the period marked by the Flexner Report of 1910 to 1953. This report is very comprehensive and informative in covering all aspects of medical education.

Shryock, Richard H. "European Backgrounds of American Medical Education (1600-1900)," *Journal of the American Medical Association*, 194: 119-24, November 15, 1965.

Traces the development of medical education in America from roots established in Europe. Contains comparative analyses of methods of control, process of internship replacing apprenticeship, admission of women, and accreditation procedures. Describes the influences of German and English models on the American institutions of medical education.

Smiley, Dean F. (ed.). *Medical Education Today: Its Aims, Problems, and Trends*. Chicago, Ill.: Association of American Medical Schools, 1953. 123 pp.

A major study of medical education, which includes writings of prominent medical educators. Subjects include objectives, faculties, finance, and trends in medical practice and education.

Snoke, A. W. "The Teaching Hospital," *Journal of Medical Education*, 37:225, 1962.

Stresses the need for trained administrators in medical schools and teaching hospitals.

Stead, Eugene A. "The Evolution of a Medical University," *Journal of Medical Education*, 39:368-374, April, 1964.

States that the idea and reality of a medical university is emerging from undergraduate medical colleges. Certain changes occur with this phenomenon--students come from less homogeneous areas; colleges have more specialized faculty; research is incorporated more as an educational tool. In short, the graduate approach is emphasized. The author believes that this evolution is more likely to take place when the medical school is a part of a university. Sees only good in a university approach to medical education.

Stewart, Blair. *Liberal Arts and Medical Education*. Oberlin, Ohio: Oberlin College, October, 1957. 105 pp.

A report directed to the undergraduate training of the physician. It is a survey of the relations between preprofessional and professional education from the point of view of a single liberal arts college -- Oberlin.

Symposium on Medical Education, No. 3. *Journal of the American Medical Association*, 185, 5, August 3, 1963. 376 pp.

Elkins, Wilson H. "The Health of Wealth from Multiple Sources," pp. 376-81.

Points to an "...urgent need for the government to have a clearly defined program of support" and favors establishing a body of eminent educators to define the program and coordinate grants. He urges vigorous leadership by the administrations of medical schools, who have ultimate responsibility for them. Also recommended is an increase in efforts to gain support from non-federal sources.

Wescoe, W. C. "Cause, Effect, and Correction," pp. 371-75.

Finds the administrations of have-not medical schools largely to blame for their plight--"primarily purveyors of medical service rather than providers of medical education," with minimal budgets pieced out to provide not a "...minimally adequate program for medicine alone," but something less for both medical and other professional students.

Willard, William L. "The Widening Gap Between Two Extreme Groups of Medical Schools," pp. 367-76.

Submits that the gap between the medical schools divided into the "haves" and "have-nots" of resources is widening and will continue, largely because of the allocation of federal financial support. This gap raises the question of assistance to the schools lacking resources. Facts presented illustrate that annual operating expenditures lag far behind increases in financial support.

Turner, Thomas. Fundamentals of Medical Education. Springfield, Ill.: Charles C. Thomas, 1963. 80 pp.

Offers the thesis that medical education is at the core of the health and medical program of a country; that the faculty of medical schools constitutes the greatest medical resource in a country; that within the faculty the teacher-investigator represents the germ plasm that links the medicine of the present to that of the future; that society must foster and guard the medical faculties.

Weiskotten, Herman G., et al. Medical Education in the United States 1934-1939. Chicago, Ill.: American Medical Association, 1940. 259 pp.

A comprehensive resurvey of medical schools in the United States and Canada undertaken to indicate to concerned persons which schools were advancing in accord with prevailing standards of teaching and which were lagging. The data were obtained through questionnaires and visits to eighty-nine schools of medicine.

Wolf, George, et al. "The Expanding Body of Scientific Knowledge in Medical Education and Medical Care," Journal of Medical Education, 36:21-41, December, 1961.

Explains that during the last five hundred years, emphasis in understanding disease and health has shifted from anatomy to physiology and pathology to biochemistry and medical ecology. Now is the time for the social sciences to contribute; emphasis is needed on human values, not on economics. Specialization is necessary to produce highly qualified individuals who can stay abreast of rapid increase in scientific knowledge. Various types of specialists are needed: some concentrating on synthesis, interpretation, and coordination. Professional schools need to adopt different goals to enhance diversity within a profession.

Wolf, Stewart and Ward Darley (eds.). "Medical Education and Practice: Relationships and Responsibilities in a Changing Society," Journal of Medical Education, 40 (Parts I and II) (entire issue), January, 1965. 410 pp.

A book exploring the social forces at work in present society and the implications for the university, the medical profession, and the general public. The authors assert that the growing influence of the university contributes to the educator-practitioner conflict. This is due to the university's tradition of truth-seeking and change-making influence. Evaluation of goals, a redefinition of old goals, and the establishment of new goals are all needed if medical schools are to accommodate effectively to changes taking place in society.

NURSING

American Nurses Association. "Education for Nursing," American Journal of Nursing, 65:12, 106-11, December, 1965.

A statement of position on the nature and scope of nursing practice and the type and quality of education needed by nursing practitioners. Depicts two levels of nursing--professional and technical.

Davis, Fred (ed.). The Nursing Profession. New York: John Wiley and Sons, Inc., 1966. 203 pp.

Five sociological essays describing and analyzing certain aspects of the nursing profession. Such topics as the structure and ideology of American nursing, problems and issues in collegiate nursing education, and nursing and patient care are discussed.

Dunstan, Laura C. "Characteristics of Students in Three Types of Nursing Education Programs," Nursing Research, 13:159-66, Spring, 1964.

A study with the central aim of determining the congruence or "fit" between requirements and objectives of each of the three types of programs and the characteristics and career expectations of the enrolled students.

Eron, L. D. "Effects of Nursing Education on Attitudes," Nursing Research, 4:24, June, 1955.

This study examines the effects of nursing education on the anxiety level, authoritarianism, political-economic conservatism, humanitarianism, and cynicism of students. Nursing students at Yale were compared with hospital nursing students, practicing nurses, and medical students.

Griffin, G. J., R. E. Kensinger, and A. J. Pitman. Clinical Nursing Instruction by Television. Nursing Education Monographs. New York: Columbia University Teachers College Bureau of Publication. 79 pp.

A study proposing to find out whether a large number of students can be taught in the clinical setting through the use of television and whether these students can be taught as effectively as through a more conventional method.

Guinee, Kathleen K. The Aims and Methods of Nursing Education. New York: Macmillan Co., 1966. 261 pp.

A book addressed to the senior level college students of nursing and for nurses in higher education and administration as related to nursing.

Heidgerken, Loretta E. "Nursing Student Evaluates Her Teachers," Nursing Research, 1:40.

Describes student evaluation of teachers in terms of personal qualities and teaching qualities. Two variables are not described as frequently by nursing students as by other college students: (1) the stimulating of intellectual curiosity, and (2) openmindedness and tolerance.

Johannesen, Walter J., et al. "Personality and Attitudinal Changes During Psychiatric Nursing Affiliation," Nursing Research, 13:342.

Compares diploma nursing students in terms of the type of psychiatric nursing experience they have had. Personality changes do occur as a function of the psychiatric nursing affiliation but may be affected significantly by institutional atmosphere.

MacAndrew, Elliott. "Varying Images of the Professional Nurse: A Case Study," Nursing Research, 8:33.

Raises the question whether the nursing educator-policy-maker is able to transform her ideas into realities through the graduating students. Specifically, the study asks: (1) the extent to which the program innovator's image of the ideal nurse has been common to her faculty, (2) whether and to what extent do graduating seniors' self-image approximate the faculty ideal.

Meyer, Genevieve R. "Attitude of Student Nurses Toward Patient Contact and Their Images of the Preferences for Four Nursing Specialties," Nursing Research, 7:126.

Uses a picture item test to compare attitudes of collegiate students, hospital students, and Future Nurses' Club high school students toward caring for patients and in ranking clinical nursing specialties.

Morris, Katherine D. "Behavioral Change: A Concomitant of Attitude Change in Nursing Students," Nursing Research, 13:132.

An exploration of attitude change as a function of psychiatric nursing experience. Indicates that the sample of second-year hospital school students did change.

Munday, Leo and Donald Hoyt. "Predicting Academic Success for Nursing Students," *Nursing Research*, 14:341-50, Fall, 1965.

It is the purpose of this study to review available data on the use of the American College Test (ACT) in nursing schools and to compare its validity with that of other measures. A secondary purpose was to summarize the predictive efficiency of ACT data with respect to grades in courses typically included in nursing school curricula.

National League for Nursing. *Criteria for the Evaluation of Educational Programs in Nursing that Lead to Baccalaureate or Master's Degree*. New York: League for Nursing, 1960. 13 pp.

A document which provides a means for: (1) self-evaluation by educational units in nursing in senior colleges and universities, (2) evaluation of baccalaureate and master's degree programs in nursing for which accreditation by the National League for Nursing is sought, (3) appraisal of plans for the development of new units in nursing in senior colleges and universities.

Smith, Gene M. "The Role of Personality in Nursing Education," *Nursing Research*, 14:54-58, Winter, 1965.

Compares pre-entrance personality test scores of 219 girls who completed a three-year nursing program with those of forty-five girls who failed to complete the program by use of appropriate univariate and multivariate statistical procedures.

Williams, William. "Socialization of the Student Nurse," *Nursing Research*, 8:18.

Focuses on major components of the socialization of student nurses by discussing the kinds of techniques used to elicit behavior and attitude expressions from the student that lead her to general conformity to the ideals held by her instructors.

SOCIAL WORK

Bestman, F. L. "How Do Professional Workers Become Professional?" Social Casework, 37:383-88, October, 1956.

Emphasizes how to develop social workers who will take personal responsibility for their own development as professionals.

Boehm, Werner W. (director). Social Work Curriculum Study. 13 volumes. New York: Council on Social Work Education, 1959.

Comprehensive report of the curriculum study on social work education. Social work needs to develop a heightened sense of identity as a profession.

Study implies that two sets of social work faculty are needed. Teaching in the foundation component of social work requires faculty with doctoral work in one of the sciences basic to social work. Methods component requires faculty with advanced work in one of the methods of social work and who, in the course of doctoral work, have contributed to theory of social work practice or a chosen method.

Also needed are: Better definitions of the profession's relationship to the college or university. The graduate continuum requires clearer definition of the respective functions of undergraduate and graduate education in social work curriculum. Research-demonstration centers to facilitate closer integration of theory and methods would be desirable. Educational research is necessary for experimentation, evaluation, especially for selection of professional candidates to ascertain the relationship between the intellectually gifted and effective social work.

Dowling, J. P. "Stages in the Process of First Year Students in Veterans' Administration," Social Casework, 33:13-18, January, 1952.

Describes stages common to all students trained in West Virginia Veterans' Administration. First-year social worker students have one semester in the classroom, one semester field placement, and six weeks' class work following placement.

Stages are: (1) eagerness for practice, (2) reaction to beginning practice through retreat, projection, disappointment, (3) overcoming self-consciousness, (4) focus on client and agency with unawareness of self, (5) dissatisfaction with passivity and need to inject self into situation, (6) attempts at activity, (7) consciousness of the activity of self and more skillful use of agency services.

Gordon, M. A. "Beginning Casework Practitioner: A Categorical Deliniation," *Social Service Review*, 33:245-52, September, 1959.

Categorizes three types of workers--intuitive, empathetic, intellectual--and notes changes in each as development begins. Clues to change in students differ in each type.

Hamilton, G. "Self-Awareness in Professional Education," *Social Casework*, 35:371-79, November, 1954.

Outlines three types of parallel learning in social work: (1) primary learning--skills and knowledge central to the field, (2) associated learning--information, theory, etc. from other fields such as sociology, medicine, and (3) attendant learning--ethics and values.

Increasing self-awareness is essential to professional education since knowledge of self is crucial to knowledge of and working with others in the helping professions. Describes levels of student self-awareness which occur during the first and second year of social work school.

Hollis, Ernest V. and Alice L. Taylor. *Social Work Education in the United States*. New York: Columbia University Press, 1951. 432 pp.

A thoughtful and helpful analytical report of a study for the National Council on Social Work Education, viewing education as a continuing process from undergraduate foundation through graduate school to professional development on the job. Emphasizes the interrelationship of education and social work practice. Describes problems of field work and specialization. States forcefully that the responsibility for social work education rests with the total social work community. Suggests appropriate roles for educational institutions, practitioner organization, employment agencies, and the supporting public. Identifies basic problems facing social work education and suggests lines of action for seeking solutions. A major issue discussed is the problem of accreditation of social work education.

Another issue discussed at length is the failure of the university to accept the responsibility for *preparing social workers* to the degree that they accept as a matter of course for the other professions. Chapter VI is devoted to analyses and recommendations on the points of cooperation and conflict between social work and university officials.

Meier, E. G. "Parallels in Development: Student and Profession," *Social Casework*, 32:407-13, December, 1951.

Presents thesis that student development parallels that of the profession, e.g., growing awareness and sophistication in choice of method.

Author notes growing cooperation among social sciences.

Regensburg, J. "Some Thoughts on Being a Professional Caseworker," Social Casework, 40: 220-25, April, 1959.

Review of elements of a profession and how social work fits that description.

Smith, E. D. "Education and the Task of Making Social Work Professional," Social Service Review, 31:1-10, March, 1957.

Suggestions for improving social work by recruitment of better students, enriching program, etc.

TEACHING

Beggs, Walter. The Education of Teachers. New York: The Center for Applied Research in Education, Inc., 1965. 116 pp.

Chapter I examines the historical development of teacher education extending back to Ancient Greece. Chapter II presents recent generally accepted patterns and variations to be found between and among states and among institutions. Chapters III and IV discuss certification and accreditation of programs. Chapter V cites growing interest in teacher education, including federal government and foundations. Chapter VI discusses the teacher of the future.

Blegen, T. C. "How Can Graduate Schools Increase the Supply of College Teachers?" Journal of Higher Education, 30:127-33, March, 1959.

Suggests better methods of identifying and encouraging students of promise to enter college teaching. The period of preparation for college teaching needs to be shortened. One way to accomplish this is through a two-year master's degree especially fitted to the needs of future college teachers.

Brown, K. I. "Identifying Early the Potentially Good College Teacher and Encouraging Him to Enter a Career of Scholarship and Teaching," Current Issues in Higher Education. Edited by G. Kerry Smith. Washington, D.C.: National Education Association, 1961, pp. 105-8.

Suggests the formation of young college men and women into a preteaching group similar to premedic and prelaw groups.

Brunner, Ken A. and Clarence B. Lindquist. "Recent Faculty and Instructional Practices in Junior Colleges," Junior College Journal, 30:327-39, February, 1960.

A digest of the findings of Lindquist's study (College and University Faculties) as they pertain to the junior college. Elaborates in further detail the information on the junior college as presented in the study and extends this to comparative analysis between the junior colleges and all other universities and colleges.

Bunnell, Kevin P. "Recruiting College Faculty Members: A Short-Range View of the Problem," Educational Record, 41:138-42, April, 1960.

The results of a survey of twenty-three deans and college presidents in the U.S. to determine what current and effective recruiting methods are in progress. Discusses twelve presently

used methods which attempt to break away from the traditional methods of contacting placement offices, writing to graduate deans, attending professional meetings, etc. The survey concludes that better organized, more imaginative programs of faculty recruitment are non-existant.

Cook, Walter W. *A Study of Job Motivations, Activities, and Satisfactions of Present and Prospective Women Faculty Members*. U. S. Office of Education Cooperative Research Project No. 557. Minneapolis, Minn.: University of Minnesota, May, 1960. 100 pp.

Contains an extensive review of related literature and interviews with women faculty members in several institutions.

David, Henry. "What Are the Basic Problems in the Preparation of College Teachers?" *Current Issues in Higher Education*, Edited by G. Kerry Smith. Washington, D.C.: National Education Association, 1960, pp. 179-82.

States that the enterprise of college teaching is vast, multi-purposed, and undecided about its internal value system and consequently about its own standards of performance. Both undergraduate and graduate students need to encounter effective teachers to serve as models.

Eckert, Ruth E. "Recruiting College Faculty: Report on the Minnesota Study," *Current Issues in Higher Education*. Edited by G. Kerry Smith. Washington, D.C.: National Education Association, 1958, pp. 66-70.

Presents the findings of a sampling study of all the full-time faculty members of Minnesota's thirty-two private and public colleges of the University of Minnesota. The survey questionnaire was designed to study the motivational factors for entering and remaining in college teaching.

Elder, John P. "Reviving the Master's Degree for the Prospective College Teacher," *Journal of Higher Education*, 30:133-36, March, 1959.

Argues the need for a master's program of a year and a half for future college teachers. Principal requirements for such a degree and possible positions for holders of the degree are considered.

Farber, Maurine L. and Weton A. Bousfield. "College Teaching as a Profession: A Study of Students' Opinions at the University of Connecticut," *Journal of Higher Education*, 29:70-72, February,1958.

A study which aims to learn the effects of economic, sociological, and psychological factors on the attitudes of the college student toward college teaching as a career. Eighty-seven juniors and seniors were polled for data in the survey.

Fiess, Edward. "College Teachers Must Come from Colleges," *College and University*, 32:336-41, Spring, 1957.

A survey of graduates of Antioch College who became employed by the college as faculty, to learn what factors influenced their decision to become teachers. The article discusses survey results and ways of encouraging this decision.

"Graduate Training for College Teaching: A Panel Discussion," *American Association of University Professors Bulletin*, 46:294-99, September, 1960.

A panel composed of Earl J. McGrath of Columbia; Dean Mark H. Ingraham of Wisconsin; and Bower Aly of University of Oregon. Submits statements of criticism and evaluation of graduate programs of college teaching which lag far behind in fulfilling the aims of college teaching, which panel feels must be recognized as a specific profession.

Gray, William D. "Identification and Recruitment of Prospective College Teachers." *School and Society*, 87:459-460, November 7, 1959.

Describes the University of Pittsburgh program designed to identify, encourage, direct, and assist outstanding students who might be interested in college teaching career.

Gustad, John W. *The Career Decisions of College Teachers*. SREB Research Monograph Series No. 2. Atlanta: Southern Regional Education Board, 1960. 87 pp.

Presents extensive statistical data from responses in interviews and to questionnaires designed to answer questions: Why do some individuals choose to become college teachers? Why do some of these decide to leave?

Presents analysis of information by teaching field and by present and former teachers. Subjects were Southern college and university instructors of psychology, English, and chemistry. Includes excellent chapters on other related information concerning life histories, job activities, motivations, values, personnel practices, working conditions, and career plans and objectives.

Houpt, William S. "Supply, Demand, and Qualification Factors Related to Teaching Personnel for California's Colleges and Universities," *Journal of Educational Research*, 51:373-77, January, 1958.

Reports the results of a survey by questionnaire of 240 college and university officials in California to determine what characteristics are needed for effective teachers in higher education. Includes discussion and recommendations for professional education programs and recruitment of talent.

Houston, Neal B. and James G. Umstattd. "Teacher Personnel Problems in Junior and Senior Colleges and Universities," Review of Educational Research, 28:234-41, June, 1958.

Analyzes and reviews the literature and research in teacher education dealing with the following categories: (1) preparation, (2) certification, (3) supply and demand of college teachers, (4) rank, promotion, and tenure, (5) rating the college teacher, (6) salaries, (7) academic freedom, (8) retirement.

Hug, Elsie A. "Teacher Training for Professional Schools," Journal of Dental Education, 23:47-51, March, 1959.

States that the literature indicates that concern is growing for what use has or has not been made of educational science--the findings and methods of professional education--in training programs for other professions such as dentistry and medicine.

Iffert, Robert E. "Staffing Institutions of Higher Education in the Next Decade," Higher Education, 13:66-68, December, 1956.

Tabulated estimates of staff requirements in higher educational institutions in the United States. Compares number actually used during the period between 1945-1953 with the 1965 projected requirement. Estimates that by 1965 approximately one hundred persons would be required for every sixty required to staff higher educational institutions in 1956.

King, John E. "The Doctorate in Education," Phi Delta Kappan, 42:382-86, June, 1961.

An extensive summary from three volumes of the American Association of Colleges for Teacher Education's inquiry into the doctorate in education.

Lindquist, Clarence B. College and University Faculties: Recent Personnel and Instructional Practices. U.S. Office of Education Bulletin 1959, No. 27. Washington D.C.: U.S. Government Printing Office, 1959. 61 pp.

A monograph reporting the results of a study of college and university attempts to solve the problem of instructional staff shortages during 1954-58. The information is analyzed by: type

and size of institution, twenty-one specific practices of employment, promotion, retention, and staff utilization. Excellent discussion of practices, comments by respondents, graduate education and training programs, and recruitment.

McCutcheon, Roger P. "The Preparation of College Teachers," Graduate Journal, 1:139-43, Fall, 1958.

The author considers the feasibility of graduate training program for college teaching which will maintain higher quality in graduate education but will not prolong the time required for the present Ph.D.

McCutcheon, Roger P. (ed.). The Place of the Graduate School in Training of College Teachers. New Orleans: Tulane University Bookstore, 1952. 55 pp.

Includes addresses by Theodore Blegen, Henry P. Hill, and Francis Keppel presented at a conference of graduate deans and faculty members of Southern graduate schools. Also reports of studies on preparation for college teaching in the humanities, social sciences, and physical and biological sciences.

Maul, Ray C. Teachers Supply and Demand in Universities, Colleges, and Junior Colleges, 1957-1959. Washington, D.C.: National Education Association, June, 1959. 87 pp.

A comprehensive study based on responses to questionnaires from 1,350 institutions. The major goal was to identify all newly employed full-time instructional personnel during 1957-58 and 1958-59 and to examine their backgrounds and degrees.

O'Dowd, D. R. and D. C. Beardsless. College Student Images of a Selected Group of Professions and Occupations. U.S. Office of Education Cooperative Research Project No. 562, April, 1960. 22 pp.

Contains a large sample of college students in four colleges who rate the characteristics of fifteen fields which attract college graduates. The image of college professor stressed intellectual competence along with sensitivity to artistic or aesthetic experience. Suggests that this image of professors held by college students is lacking in masculinity.

Pfnister, Allan O. "The Preparation of College Teachers," School and Society, 88:348-50, October 8, 1960.

Analyzes and discusses four elements in college teachers' preparation: teachers, students, subject matter, and communication.

Semans, H. H. and T. C. Holy. *A Study of Faculty Demand and Supply in California Higher Education, 1957-70*. Prepared for the Liaison Committee of the Regents of the University of California and the California State Board of Education. Berkeley, Cal.: University of California Press, 1958. 76 pp.

A study to gather data to determine: (1) staff requirement by fields and total by 1960-65-70, (2) characteristics of new faculty appointees regarding highest degrees held, rank appointment, and doctorate institution, (3) expected national and state supply of master's and doctoral degrees by fields and what percentage of these will go into teaching, (4) outlook for supply and demand in specific fields, and (5) suggestions for providing adequate numbers of staff members without loss of quality.

Standler, L. S. and W. J. Popham. *Professional and Academic Preparation of Teachers Related to Two Indices of Teaching Performance*. Bloomington, Ind.: School of Education, Indiana University, 1958. 15 pp.

Attempts to produce some objective evidence regarding controversy over the preparation of teachers by relating the professional and academic credit hours and credit points of 800 Indiana public school teachers to two indices of teaching performance. Neither the professional nor the academic preparation of teachers was found to be related to either of the two indices of teaching performance.

Indices of teaching performance were: (1) Minnesota Teaching Attitude Inventory Scores and (2) principals' ratings of teachers.

Stauffer, John Nissley, *Judgments of Liberal Arts College Teachers and Deans Regarding College Teacher Qualifications*. Unpublished doctoral dissertation, Pennsylvania State University, University Park, Pennsylvania, 1956. 141 pp.

The purpose of this study was to determine: (1) the relative importance of qualification of college teachers in the judgment of the academic dean and their most promising young teachers, (2) the extent of agreement between judgments by deans and teachers and between these judgments and those previously reported for presidents by Trabue, (3) what qualifications are representative of successful college teachers in the judgment of deans and teachers.

Stoikov, Vladimir. "Has the Quality of the College Teacher Declined?" *Journal of Higher Education*, 30:455-58, November, 1959.

Presents statistical data which indicate that instructors with doctoral degrees have increased in number in every category of higher education institions from 42.2 per cent to 49.6 per cent. The author discusses the reasons for this increase and submits that one cannot deduce a trend in the opposite direction from the single fact of the declining percentage of doctorates among new college teachers.

Stone, James C. "The Preparation of Academic Instructors for the Junior College," *Junior College Journal*, 28:368-71, March, 1958.

Analyzes the problems and inadequacies of educational programs for academic instructors at the junior college level. He proposes a program assuring a standard of quality in academic preparation and discusses certification in California for the junior college teacher.

Strothmann, F. W. "What Changes Will Be Necessary or Desirable in the Preparation of College Teachers," *Current Issues in Higher Education*. Edited by G. Kerry Smith. Washington, D.C.: National Education Association, 1957, pp. 182-86.

Discusses the necessity of providing three educational experiences for the teacher of the college undergraduate in addition to normal course work: (1) creative team research, (2) practice in writing for reporting of research results, (3) conducting discussion, presenting material meaningfully, and effecting change in groups rather than using solely the lecture method.

Taylor, Robb R. (ed.). *Proceedings of an Institute on College Teaching*. Milwaukee, Wisconsin: Marquette University, 1961. 68 pp.

A conference to interest college students in college teaching as a profession.

Trout, David M. (ed.). *The Education of Teachers*. Lansing, Michigan: Michigan Cooperative Teachers Education Study, 1943. 200 pp.

Describes in detail the activities, the developments, and the proposals on which future teacher education and practice should be based. An enumeration of the significant emphasis and developments includes the observations that: (1) general education of teachers receives emphasis; (2) further integration of theory and practice through professional courses is evident; (3) a better understanding of child growth and development is needed; (4) better programs of guidance and personnel practices are needed; and (5) group planning and action are coming into full recognition in institutions. This book includes contributions from twenty-nine authors. These contributions are referred to as studies; however, this term is used here extremely loosely.

Veltman, Peter. Study of the Preservice and Inservice Training of Full-Time Teachers in Co-educational Protestant Church-Related Junior Colleges. Doctoral dissertation (Ph.D.), Northwestern University, Evanston, Illinois, 1959. 253 pp.

A questionnaire study of 436 full-time teachers in forty-six junior colleges, forty-six administrators, and thirty-three college board presidents regarding actual and desirable preservice preparation and inservice activities of junior college teachers. Finds many gaps between qualifications desired by administrators and board presidents and qualifications possessed by teachers. Makes recommendations to teacher training institutions and to junior colleges.

Walters, Everett. "A New Degree for College Teachers," Journal of Higher Education, 31:282-84, May, 1960.

Discusses the rationale for a "Master of Philosophy" degree. To the graduate work now required for the doctorate would be added other important requirements. The Master of Philosophy must demonstrate ability in research so that a dissertation of quality submitted to a properly constituted committee of the graduate school would qualify him for the Ph.D.

Woodring, Paul. "The Profession of College Teaching," Journal of Higher Education, 31:280-82, May, 1960.

Submits the thesis that most college instructors will not be highly productive in scholarship and publication or research. Many of this group will be effective in teaching, and an educational program to better prepare them for college teaching is vital at this time. The Ph.D. should be a degree for the research scholar rather than an overall title which is becoming meaningless.

THEOLOGY

Brown, Coleman. "Students' Perspective," Union Seminary Quarterly Review, 14:32-36, March, 1959.

A study of the students at Union Theological Seminary. Students believe that diversity characterizes their student body. Discusses polarities in students, in individuals as well as among groups. Interesting discussion on differing views between faculty and students on composition and outlook of students.

Bruder, Rev. Ernest E. and Marion L. Bart. "A Survey of Ten Years of Clinical Pastoral Training at St. Elizabeth's Hospital," Journal of Pastoral Care, 19:86-96, 1956.

Survey which finds that men who have not had clinical training show a lack of sense, tact, and understanding of the mentally disturbed patient.

Bucke, Emory S. (ed.). Religion in Life, 31: Autumn,1962.

An entire issue devoted to divinity students. "...the real key lies not in better methods either of recruiting students or of teaching them, but in the renewal of the church as a whole."

Editorial: "Domesticity in our Seminaries," Christian Century, 75: 483-84, January-June, 1958.

Bemoans early marriage among seminary students. Facilities for them are costly and not easy to obtain. Married students look for practical courses and how to get through school quickly and are not interested in adventuresome exploration. Students have been rounded off, or in the editor's phrase, "gentled" too early at the cost of lively inquiry and exploration of self and ideas. He states that the church does not need more domesticated ministers.

Fairbanks, R. J. "Preparation versus Training in Theological Education." Report of Proceedings of Inter-Professions Conference on Education for Professional Responsibility, Education for Professional Responsibility, Carnegie Press, 1948, pp. 93-100.

Proposes that important movement in theological education is that of clinical training. In some cases, training is more emphasized than theology; pastoral methods, psychiatry, and psychoanalysis have been stressed to the point that the program comes close to losing sight of original vocation.

Fichter, Joseph J. *Religion as an Occupation*. Notre Dame, Indiana: University of Notre Dame Press, 1961. 295 pp.

Notes that seminary training may produce immaturity either by reason of the type of training or by withdrawal from the world. A training program that sets out deliberately to keep a person in a perpetual state of childlike dependence cannot possibly develop a professional who exhibits initiative and responsibility.

Grant, F. C. "Educating for the Ministry," *Christendom*, 3:360-72, Summer, 1948. (This journal later called *Ecumenical Review*.)

Explains that in certain fundamentalist and university circles the theology school is regarded as a technical institute to teach men the tricks of the trade. Author notes that education must include knowledge, skills, and attitudes. Too few students have a grounding in literature. Calls for students to preach more about Biblical religion than about current social problems.

Gustafson, James J. Report on Workshop on "Student Self-Image," *American Association of Theological Schools Bulletin*, Bulletin 23: 221-22, June, 1958.

A discussion on faculty responsibility in bringing students to a more adequate view of the ministry. Educational process is one of deepening life, and this occurs in the exchanges between students, as well as in the classroom.

Howe, R. L. "The Role of Clinical Training in Theological Education," *Journal of Pastoral Care*, 6:1-12, Spring, 1952.

States that theological education must address itself to the task of preparing the whole man for the work of the ministry.

Hulme, N. E. "Seminary Students and Their Family Life," *Pastoral Psychology*, 11:33-38, September, 1960.

Assumes that married students are no longer unusual; they are a part and parcel of modern theological education. Raises question of maturity. Married students may become more mature, but there is some evidence that immature students marry earlier.

Kirkland, William H. "The Organization Man and the Ministry," *Christian Century*, 75:492-94, January-June, 1958.

Asserts that the belief that theological education should consist of the accumulation of courses, credits, and grades be replaced by the aim of stimulating students to read, listen, internalize, reflect, reformulate, create, discuss, even argue,

until the activity of theologizing--by which is meant the intensely personal process of thinking about all of contemporary life in a theological way--becomes as natural as breathing.

Klink, Rev. Thomas W. "The Career of Preparation for the Ministry," Journal of Pastoral Care, 18:200-207, Winter, 1964.

States that professional educational preparation disturbs previously established patterns of managing drive energies, securing essential satisfactions, and maintaining vital relationships. Anxiety is the result, causing an intense and unpleasant subjective state of disequilibrium. A career of professional preparation can be appraised in terms of developments, alterations, and relapses in the candidate's capacity to manage anxiety. Internalization of the process of professional formulation must occur so that the attributes are relatively durable when removed from an immediately supportive environment.

Muelder, W. "The Function of Social Ethics in a Theological Seminary." Report of Proceedings of Inter-Professions Conference on Education for Professional Responsibility, Education for Professional Responsibility, Carnegie Press, 1948, pp. 177-87.

Suggests that diverse role of minister influences education to make contact with broader range of disciplines. Considerable amount of social and humanistic instruction is inevitable. Seminaries require a liberal arts degree as prerequisite for admission. A more functional emphasis is needed in seminary curriculum and in the method of instruction. Spread of scientific information, dissemination of facts and theories concerning economics, politics, and social questions, and intense interest in personal problems require faculties with diversified gifts and education. Stresses need for large number of specialists as well as general practitioners. Vast multiplication of specialized courses occurred, due to broadening of the minister's role. Problem: splintering curriculum offers no integrated professional training in classroom and field work, but a mosaic of fragments.

Niehbur, H. Richard, Daniel Williams, and James Gustafson. The Advancement of Theological Education. New York: Harper and Brothers, 1957. 239 pp.

Includes chapters on trends, faculty-student ratio, faculty preparation. Sees decline over 200 years in quality of men recruited to the Protestant ministry; hence, greater emphasis is needed on selective recruiting. Discusses recent trends in courses of study: (1) tendency to relate studies to contemporary life, (2) trend to introduce non-theological disciplines which seem necessary to interpret theology and as background for practical work, (3) introduction of new disciplines in pastoral theology, (4) more emphasis on learning by doing, and increased participation by schools in the work of the church, (5) tendency to develop prescribed curriculum consisting of many introductory courses. Theological schools find it difficult to acquire and keep strong faculties. Excellent material on sources, problems of salary, self-improvement, etc. Chapters on students are based on interviews in a number of seminaries.

Palmer, Everett W. "Becoming a Good Minister of Jesus Christ," Religion in Life, 31:529-536, Autumn, 1962.

Comments that H. Richard Niehbur feels that theological education "is becoming too professional," too technical, and is neglecting cultivation of the fact that resources always must spring from God.

St. Amant, Penrose. "The Private World of Theological Students," Religion in Life, 31:497-506, Autumn, 1962.

Discusses motivation in young people. States that they express greater interest in politics than in theology. Mixed motives are noted among seminary students. Students conceive of the parish ministry in pedestrian terms. States that, "We cannot afford to have the bulk of our best minds turned away from the pastorage into teaching." Notes that theological schools convey the idea that teaching and scholarship are more important than the pastorage.

"Seminarians Speak," Christian Century, 76:498-99, April, 1959.

Unsigned evaluations by seminary students of their life and studies.

In "Motivated by What?," student writer takes middle way between idea that seminarians are now a "beat generation" in search of faith, and the idea that seminarians are young organization men seeking techniques and the easy way through, largely because they are now married and quite settled. Writer blames neither seminarians nor married students, but notes that "ecclesiastical Babbitry" is part of "cultural Babbitry." Another student notes that seminary students have rejected the inherited concept of social action as a program of the church.

Shoemaker, Samuel M. Beginning Your Ministry. New York: Harper and Row, 1963. 127 pp.

States that the seminary seems headed in the same direction as ordinary secular graduate schools, in competition with other seminaries for academic standing, and sees this at the expense of individual who study there. Author advises that seminaries should practice what they preach--they preach human recognition but do not practice it with respect to students.

Smith, Thomas. "The Contemporary Student: A Potential Minister," Religion in Life, 31:519-28, Autumn, 1962.

Notes growing difficulty in recruiting young men to the ministery since prestige of law and medicine competes for good material. Church does not communicate opportunities for service as does the Peace Corps in the minds of young people. Author notes that young people want security early, thus constituting a problem for a profession which demands lengthy and rigorous education.

Thomas, Owen C. "Psychological Pressures on the Seminarian," Journal of Pastoral Care, 16:95-97, Summer, 1962.

States that of all the schools which use Harvard Health Services, the two which usually have the highest percentage of students using psychiatric services are Harvard Divinity and Episcopal Theology School. Author notes that men of the cloth are deeply involved in existential questions in their work; hence, they need to work with a psychiatrist to understand themselves. Author rejects idea that seminarians are more sensitive to personal and social tensions than are other good students. Also finds that second reason for use of psychiatric services is the anomalous position of the church in the society of our time. Third reason for psychiatric pressures is that students have doubts about their vocation that are more excruciating than those of medical or law students.

Van Dusen, Henry. "Ministers in the Making." Report of Proceedings of Inter-Professions Conference on Education for Professional Responsibility, Education for Professional Responsibility. Pittsburgh, Penn.: Carnegie Press, 1948, pp. 60-66.

Treats issues in philosophy of theological education: proper balance and relationship between the subject-matter disciplines and practical experience in professional preparation. Outlines specialization versus generalization. This author is on the side of generalization.

Van Dusen, Henry. "The President's Perspective," Union Seminary Quarterly Review, 14:25-32, March, 1959.

A review by Van Dusen, president of the Union, of characteristics and problems of students. Concludes: (1) This generation broods about its world. (2) It is denied normal and healthy expression of social radicalisms since the Communists have taken that over. (This is pre-civil rights era.) (3) For this generation, corporate standards of moral behavior are dissolved; private standards remain. (4) Radical individualism is embraced but there is no recognition of personal responsibility for corporate or social ethos. Students say that their lives are full of paradoxes. Author notes that students are taken up with existentialism and are very self-preoccupied. This leaves the individual wallowing in subjectivism and contradicts historical inquiry and the search for objective truth.

Wersell, Thomas W. Why I Am at the Seminary. Rock Island, Ill.: Augustana Press, 1960. 160 pp.

Forty-one autobiographical statements by divinity students, both young and old. Excellent for presocialization materials.